

Appendix 8.1

Preliminary Ecological Appraisal Report (Non-Confidential)

Abergelli Power Project Preliminary Ecological Appraisal - NON-CONFIDENTIAL

Abergelli Power Limited
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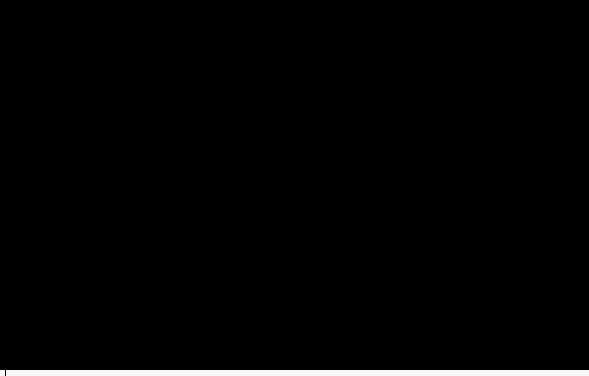
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1. Executive Summary

- 1.1.1 AECOM was instructed by Abergelli Power Limited to carry out a Preliminary Ecological Appraisal (PEA) of the Abergelli site, hereafter referred to as ‘the Project Site’. The central grid reference for the Project Site is SN 6528 0143 and the boundary of the Project Site is shown on Figure 1.
- 1.1.2 The Project Site supports woodland, rows of trees, standalone trees, dense and scattered scrub, improved, semi-improved and marshy grassland, tall ruderal vegetation, running water, fences and bare ground (hard standing).
- 1.1.3 The Project will require the partial removal of hedgerows, semi-natural broadleaved woodland, rows of trees, scrub, running water, ponds, hardstanding, marshy semi-improved and improved grassland and trees with potential for roosting bats.
- 1.1.4 The Project Site has potential to support the following protected species; marshy fritillary butterfly, great crested newt, reptiles, breeding birds, bats, hazel dormouse, badger, polecat, otter and water vole. The site may support important hedgerows.
- 1.1.5 In order to inform the production of an Ecological Impact Assessment as part of a wider Environmental Impact Assessment the following surveys are recommended:

Feature/Species	Details	Survey Timing
Important Hedgerows	Hedgerows proposed to be removed as part of the development should be assessed by a suitably qualified ecologist to determine if they are classified as an important hedgerow under the hedgerow regulations, 1997 (Ref. 1).	April to early-June
Tree Preservation Orders (TPO)	A survey to identify TPO trees outside of the Project Site boundary which will be affected by the works should be undertaken.	Anytime
Invertebrates (including marsh fritillary butterfly)	Consultation with NRW and the local planning authority required to determine the need for further surveys.	To be confirmed.
Great Crested Newt	Surveys for great crested newts to be undertaken on suitable ponds within the Project Site boundary, and within 500 m of the Project Site boundary to determine if they are present in the area.	Manual surveys: Between mid-March and mid-June; two of which should be between mid-April and mid-May. eDNA sampling surveys: Water samples must be taken between the 15th

Feature/Species	Details	Survey Timing
		April and 30 th June.
Reptiles	Presence absence surveys in suitable areas of habitat using artificial refugia	Seven surveys to be undertaken between April and September, avoiding the summer months of July and August if possible.
Breeding Birds	Breeding bird surveys to be undertaken within suitable areas of habitat within the site to assess presence, population and activity of birds. Particular focus will be paid to protected/priority species breeding in woodland, hedgerows and scrub and ground nesting birds in particular lapwing in areas of marshy and semi-improved grassland.	Breeding birds - four visits between March and July.
Bats – Tree Assessments	If trees or broadleaved semi-natural woodland within the Project Site are to be removed or illuminated by external lighting a preliminary ground level roost assessment should be undertaken on all trees.	Anytime, ideally in winter
Bats – Building and Structure Assessments	Buildings and/or structures within the vicinity of the Project Site should be assessed for their potential to support summer roosting and winter hibernating bats.	Anytime
Bats – Tree Roost Survey	<p>Any trees to be removed which have been assessed as having low potential to support roosting bats will not be subject to further surveys, but precautionary measures may be appropriate during felling or pruning activities.</p> <p>Any trees to be removed which have been assessed as having moderate or high potential to support roosting bats may require a further Potential Roost Feature (PRF) climbed inspection survey and/or will require presence/absence surveys to be undertaken</p>	May - September
Bats – Buildings and Structures Survey	Any buildings or structures assessed as having potential to support roosting bats may require an internal inspection,	Summer Roosts: May - September. Up to

Feature/Species	Details	Survey Timing
	<p>winter hibernations survey, and/or will require presence/absence surveys to be undertaken.</p> <p>To establish roost presence or likely absence up to three manual surveys (dusk/dawn) are to be completed following the Bat Survey Guidelines (Ref. 2).</p>	<p>three visits.</p> <p>Winter Roosts: October - April</p>
Bats – Activity Survey	<p><i>Transect Surveys:</i></p> <p>Two site visits a month, for each month between April and October inclusive for walked transects. Two people must be present on each transect. Transects will incorporate all areas of suitable habitat. Particular focus will be on commuting bats using the hedgerows and tree lines. The transect route will depend on suitable and safe access.</p> <p><i>Automated/Static Activity Surveys:</i></p> <p>Three locations per transect with data to be collected on five consecutive nights per month, for each month between April and October inclusive for remote detector surveys. The devices will be placed out and retrieved after each session. Recordings are then analysed in the office.</p>	<p>April - October.</p> <p>Two site visits per month.</p>
Hazel Dormouse	<p>A consultation with NRW and the local planning authority will be required to determine if further surveys for hazel dormouse are required.</p>	<p>If surveys are required. Dormouse tubes must be deployed within suitable areas of habitat and surveys must be undertaken once per month between April and November.</p>
Badger		<p>October - April</p>

Feature/Species	Details	Survey Timing
Otter	<p>An otter survey should be undertaken along watercourses and ditches and at least 100 m from the Project Site to ascertain presence and distribution.</p> <p>Otters have previously been identified within the local area (see Table 4-1)</p>	Anytime
Water Vole	A water vole survey should be undertaken.	Two surveys required: one mid-April – June, and another July – September, at least 2 months apart.
Invasive Non-Native Plants	An INNS survey is required within areas that could not be accessed during the PEA.	May - September

1.1.6 The Executive Summary is not a substitute for the full report. Refer to the full text for further detail.

2. Introduction

2.1 Introduction

- 2.1.1 AECOM was instructed by Abergelli Power Limited (APL) to carry out a Preliminary Ecological Appraisal (PEA) of the Abergelli site, hereafter referred to as ‘the Project Site’. The central grid reference for the Project Site is SN 6528 0143 and the boundary of the Project Site is shown on Figure 1.
- 2.1.2 This PEA was commissioned to identify whether there are known or potential ecological receptors (nature conservation designations, and protected and notable habitats and species) that may constrain or influence the design and implementation of the Project. The approach applied when undertaking this PEA pays due regard to the *Guidelines for Preliminary Ecological Appraisal* published by the Chartered Institute of Ecology and Environmental Management (Ref. 3). The PEA addresses relevant wildlife legislation and planning policy as summarised in Section 2 of this report.
- 2.1.3 In order to deliver the PEA, a desk study and an extended Phase 1 Habitat Survey were undertaken by an appropriately experienced ecologist, to identify ecological features within the Project Site and the wider potential zone of influence of the Project. The potential zone of influence was defined with reference to the project description provided by APL as shown as the habitats surveyed on Figure 1. Additional details are provided in Section 3: Methodology.

2.2 Proposed Development

- 2.2.1 The Project Site is located near to the village of Felindre, Swansea, as shown in Figure 1.1 of the ES, and the central grid reference for the Project Site is SN65280143. The Project Site is approximately 30.66 ha. A full description of the development is provided in Chapter 3: Project and Site Description) of the PEIR.
- 2.2.2 The development will require the removal of hedgerows, semi-natural broadleaved woodland, rows of trees, scrub, running water, ponds, hardstanding, marshy grassland, semi-improved grassland, improved grassland, and trees with potential for roosting bats.
- 2.2.3 It is understood that construction is programmed to commence no sooner than 2020/2021.

2.3 Objectives

- 2.3.1 The objectives of the PEA were:
- Identify designated nature conservation sites on or within proximity to the Project Site;
 - Identify known records of protected or notable species within proximity to the Project Site;

- Identify and categorise the main habitats and features of ecological interest present within the Project Site ;
- Appraise the potential for protected or notable species of fauna and flora;
- Provide advice on potential ecological constraints and opportunities on or within proximity to the Project Site;
- Identify the requirement for further habitat and species surveys;
- Make recommendations for requirements to avoid and mitigate ecological impacts as well as opportunities for biodiversity enhancements; and,
- Provide a map showing the Phase 1 habitats on the Project Site and features of ecological interest.

2.3.2 The purpose of this report is to support the submission of a Development Consent Order (DCO) application. The report identifies the scope of further work (where necessary) that would be required to support a DCO application. High level recommendations are made on potential options for the avoidance, mitigation or compensation of the potential impacts of the Project (where known) on the identified ecological receptors, and of potential enhancements to the biodiversity and ecosystem services. A full assessment of potential effects and mitigation will be made during the Ecological Impact Assessment (EclA).

2.4 Wildlife Legislation and Planning Policy

Wildlife Legislation

2.4.1 There are several different acts of legislation and regulations which refer to the protection of wildlife. These are summarised in Appendix A. In particular, the legislation relating to possible protected species on the Project Site is outlined. This is a brief summary of the legislation and is not to be regarded as a definitive legal opinion. When dealing with individual cases, the client is advised to consult the full texts of the relevant legislation and obtain further legal advice.

2.4.2 The following wildlife legislation is potentially relevant to the Project:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Conservation of Habitats & Species Regulations 2017;
- Environment (Wales) Act 2016;
- The Hedgerow Regulations 1997; and,
- The Protection of Badgers Act 1992.

2.4.3 The above legislation has been considered when planning and undertaking this PEA using the methods described in Section 3, when identifying potential constraints to the Project, and when making recommendations for further survey, design options and mitigation, as discussed in Section 5. Compliance with legislation may require the attainment of relevant protected species licences prior to the implementation of the Project.

National Planning Policy

Planning Policy Wales (8th Ed. January 2016)

- 2.4.4 Planning Policy Wales (PPW) sets out the land use planning policies of Welsh Government. It provides the policy framework for the preparation of Local Development Plans. Chapter 5, Conserving and Improving the Natural Heritage and Coast, outlines Welsh Government's objectives for the conservation and improvement of natural heritage.

Technical Advice Note 5 (TAN5) Nature Conservation and Planning (2009)

- 2.4.5 The Planning Policy Wales (PPW) is supplemented by a series of Technical Advice Notes. TAN 5 provides guidance on how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. It provides advice on areas including the key principles of positive planning for nature conservation, nature conservation in Local Development Plans and development management procedures. It also provides advice on development affecting designated sites and habitats, in addition to protected or priority habitats and species.
- 2.4.6 Key Principles include that the town and country planning system in Wales should integrate nature conservation into all planning decisions; that the town and country planning system should look for development to provide a net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally and that they should ensure that the UK's international and national obligations for site, species and habitat protection are fully met in all planning decisions.

Local Planning Policy

- 2.4.7 Local Development Plans (LDPs) must be produced by every Local Planning Authority in Wales. Any development proposal will be tested against the policies within the LDP. The LDPs follow the planning guidance provide in PPW, including biodiversity and natural heritage policies. These include protecting designated sites and other areas of importance for biodiversity conservation; safeguarding protected species and priority species, including those listed in local biodiversity action plans and retaining, creating and enhancing features of importance for biodiversity conservation where appropriate.
- 2.4.8 Relevant local planning policies for City and County of Swansea (CCS) are detailed in the adopted City and County of Swansea Unitary Development Plan.
- 2.4.9 CCS has also submitted the Swansea Local Development Plan 2010 – 2025 to the Secretary of State for Examination in public. This is an emerging development plan, and is not part of the statutory development plan. However, its policies are a material consideration. :

2.4.10 Appendix A provides a summary of relevant local planning policies. For the precise wording of each specific policy please refer back to the source document. This planning policy has been considered when assessing potential ecological constraints and opportunities identified by the desk study and field surveys; and, when assessing requirements for further survey, design options and ecological mitigation, as described in Section 6.

2.5 Quality Assurance

2.5.1 This survey and subsequent report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition our IMS requires careful selection and monitoring of the performance of all sub consultants and contractors.

2.5.2 All AECOM Ecologists who worked on this project are members of (at the appropriate level) the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (Ref. 4) when undertaking ecological work.

3. Methodology

3.1 Desk Study

3.1.1 The objectives of the desk study are to review the existing information available in the public domain concerning species and habitats to identify the following:

- Internationally, nationally and locally designated sites, up to 2 km from the Project Site using the Multi Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk);
- Protected and Priority species records and records of locally designated sites up to 2 km from the Project Site, using the South East Wales Biodiversity Records Centre (SEWBRc);
- Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs) designated for bats within a 10 km radius of the Site in accordance with Bat Conservation Trust (Collins, 2016) recommendations;
- Section 7 list of Species and Habitats of Principal Importance for Conservation of Biological Diversity in Wales;
- Ancient Semi-Natural Woodland (ASNW), Plantation on Ancient Woodland Site (PAWS), Restored Ancient Woodland Site (RAWS) or Ancient Woodland Site of Unknown category (AWSU) within or adjacent to the Project Site boundary using LLE dataset (<http://lle.gov.wales/home>);
- Tree Protection Orders (TPO's) from Swansea Council; and,
- Aerial photographs and Ordnance Survey (OS) maps were reviewed to identify features of ecological interest surrounding the Project Site including ponds within 500 m, nearby areas of ecological interest and features connecting these habitats (hedgerows, watercourses, railway lines).

The reports of previous surveys undertaken by BSG Ecology and WSP/Parsons Brinckerhoff (WSP/PB) were provided by the client and were reviewed (Ref. 5).

3.2 Extended Phase 1 Habitat Survey

3.2.1 A Phase 1 Habitat Survey (Ref. 6) of the Project Site was undertaken by two suitably experienced ecologists of AECOM on the 18th and 19th May 2017.

3.2.2 The survey involved a site walkover and preliminary assessment of key habitats, land use and ecological features. The main habitats present were recorded using standard Phase 1 Habitat Survey methodology as described in the Handbook for Phase 1 Habitat Survey: A technique for Environmental Audit (JNCC, 2010). The plant species defining the habitat types on the Project Site were recorded. Evidence of any invasive plant species subject to legal controls was recorded. The Project Site was assessed for its potential to support protected or notable species in order to identify potential ecological constraints and to guide recommendations for further surveys.

3.3 Assessment of Bat Potential

3.3.1 During the Phase 1 Habitat Survey, where access allowed, trees and buildings throughout the Project Site were classified into categories dependent on the presence of features suitable as bat roost habitat.

3.3.2 Due to the size of the Project Site and the number of trees present within the Project Site boundary, it was not possible to make an assessment of every tree. However a number of trees were assessed during the Phase 1 Habitat Survey and the details of these are provided in Table 3-1 below. Trees within area of woodland present within or close to the Project Site boundary were not individually assessed but the woodlands were given an overall rating, based on species composition and age, of their likelihood to support roosting bats and/or the need for further assessment.

3.3.3 The assessment was conducted via an external appraisal from the ground using binoculars where necessary. Table 3-1 provides descriptions of the categories for buildings and trees.

3.3.4 Habitats on-site were classified into categories dependent on the presence of features suitable for bats to commute and forage. Table 3-2 provides descriptions for commuting and foraging habitats.

Table 3-1: Building and Tree Bat Roost Potential Categories

Roost Potential	Descriptions for Buildings	Descriptions for Trees
Known or Confirmed	Confirmed signs of bat presence/occupation (droppings, oily staining around entry points, insect remains, odour, scratching) and actual bat presence.	Confirmed signs of bat presence/occupation (droppings, oily staining around entry points, insect

Roost Potential	Descriptions for Buildings	Descriptions for Trees
		remains, odour, scratching) and actual bat presence.
High	<p>A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat.</p> <p>Can include structures with points of access to the interior of the building and poorly maintained fabric providing ready access points for bats into structures, but at the same time not draughty. Structures of traditional stone, brick or timber construction. Structures with large (>20 cm) roof timbers with mortice joints, cracks and holes. Structures of pre or early 20th century construction. Structures with large complicated and/or uncluttered roof spaces providing unobstructed flying spaces. Structures with weather boarding and/or hanging tiles with gaps. Structures with accessible south facing roofs. Structures with proximity to good foraging habitat such as woodland, wetland, water and /or good hedgerows.</p>	<p>A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat.</p>
Moderate	<p>A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions (e.g. temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat but unlikely to support a roost of high conservation status.</p> <p>Can include structures with some potential to support roosting bats, but fewer features than a high risk building. Features may include areas suitable for crevice dwelling and/or access points into structures. Some proximity to foraging habitat.</p>	<p>A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.</p>
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically.</p> <p>However these potential roost sites do not provide enough space, shelter protection,</p>	<p>Tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen have only very limited</p>

Roost Potential	Descriptions for Buildings	Descriptions for Trees
	appropriate conditions and/or suitable habitat to be used on a regular basis or by large numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	roosting potential.
Negligible	No features suitable for roosting bats. Can include structures constructed from unsuitable materials e.g. prefabricated with steel and sheet material. Structure is draughty, light and cool buildings with no roosting opportunities. High levels of regular disturbance including external and/or internal lighting. Building is isolated from areas of foraging habitat.	Trees with no potential to support bats.

(Source: Category descriptions drawn from Ref. 2 and Ref. 7, to be applied using professional judgement)

Table 3-2: Commuting and Foraging Habitat Potential Categories

Commuting and Foraging Potential	Descriptions
High	<p>Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Project Site is close to and connected to known roosts.</p>
Moderate	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
Low	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small number of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Negligible	<p>Negligible habitat features on site likely to be used by commuting or foraging bats.</p>

(Source: Category descriptions drawn from Ref. 2 and Ref. 7, to be applied using professional judgement)

3.4 Limitations

- 3.4.1 Biological records can be received from a wide variety of sources and may or may not be comprehensive and accurate. However, if assessed in conjunction with a Phase 1 Habitat survey, they can contribute to a robust ecological assessment of a site.
- 3.4.2 Due to the size of the Project Site, it was not possible to assess every tree or building for its potential to support bats.
- 3.4.3 Some areas adjacent to but outside of the Project Site boundary were not accessible at the time of survey and as such these habitats were surveyed from the road at a distance.
- 3.4.4 Some areas within the Project Site boundary were not accessible due to the presence of horses; these habitats were surveyed at a distance.
- 3.4.5 There is potential for trees and/or buildings with the potential to support roosting bats to have gone unrecorded due to time and access restrictions. It is possible that some species, including invasive non-native plant species may not have been recorded due to access limitations.

3.4.6 Despite the limitations described, there are deemed to be no significant limitations to this PEA.

4. Baseline Conditions

4.1 Desk Study Results

4.1.1 The designated habitats, sites and features within proximity to the Project Site are listed in Table 4-1 below and shown on Figure 2.

Table 4-1: Desk Study Results

Designation /Feature	Description
Designated Sites within 2 km	<p><u>Nant Y Crimp SSSI</u> Distance and Direction: Approximately 1.3 km west Description: Nant y Crimp is of special interest for its wet pastures, species-rich neutral grasslands and semi-natural woodland as well as associated scrub, which are host to several uncommon plant species. Notable plant species recorded at the Site include petty whin <i>Genista anglica</i>, cranberry <i>Vaccinium oxycoccos</i>, narrow buckler fern <i>Dryopteris carthusiana</i> and whorled caraway <i>Carum verticillatum</i>, the latter an Atlantic species characteristic of unimproved pastures in the South Wales coalfield. In addition, there is also a colony of the marsh fritillary butterfly <i>Euphydryas aurinia</i> at the Site. This is a declining species confined in South Wales to wet agriculturally unimproved pastures where its food plant, devil's bit scabious <i>Succisa pratensis</i>, grows in profusion.</p>
Locally Designated Sites within 2 km	<p><u>Llety-Morfil SNCI</u> Distance and Direction: Within the Project Site boundary Description: Supporting the habitats: native wet woodland, ancient woodland, structurally-diverse and species-rich scrub, and purple moor-grass and rush pasture; and the Section 7 listed moth, wall <i>Lasiommata megera</i>.</p> <p><u>Coed Barcud Wildlife Trust Reserve</u> Distance and Direction: Adjacent to the north east of the Project Site. Description: A previously improved grassland field, planted up to become a future woodland. Within the boundary of Rhos Fawr SNCI.</p> <p><u>Rhos Fawr SNCI</u> Distance and Direction: Adjacent to the northern Project Site boundary Description: Supporting the habitats: woodland containing ancient woodland indicator species, structurally-diverse and species-rich</p>

Designation /Feature	Description
	<p>scrub, species-rich neutral grassland, purple moor-grass and rush pasture, and watercourse with exposure/erosion features; and a number of Section 7 listed bird species.</p> <p><u>Felindre Grasslands SNCI</u> Distance and Direction: Adjacent to the west of the Project Site boundary. Description: Native wet woodland, lowland mixed deciduous woodland, structurally-diverse and species-rich gorse scrub, and purple moor-grass and rush pasture; and a number of Section 7 listed invertebrate and bird species, and the Schedule 1 listed birds barn owl <i>Tyto alba</i> and Northern goshawk <i>Accipiter gentilis</i>.</p> <p><u>Middle Llan SNCI</u> Distance and Direction: Adjacent to the southern Project Site boundary Description: Supporting the habitats: Continuous semi-natural linear vegetation and watercourse with exposure/erosion features.</p> <p><u>Rhyd-Y-Pandy Valley and Grasslands SNCI</u> Distance and Direction: Approximately 70 m east Description: Supporting the habitats: native wet woodland, woodland containing ancient woodland indicator species, gorse stands, lowland meadow, species-rich neutral grassland, structurally-diverse and species-rich scrub, purple moor-grass and rush pasture, reedbeds, and watercourse with exposure/erosion features; and a number of Section 7 listed invertebrate and bird species, and the Schedule 1 listed birds barn owl and red kite <i>Milvus milvus</i>.</p> <p><u>Waun Garn Wen SNCI</u> Distance and Direction: Approximately 130 m west Description: Supporting the habitats: native wet woodland, structurally-diverse and species-rich scrub, purple moor-grass and rush pasture, and watercourse with exposure/erosion features; and a number of Section 7 listed invertebrate and bird species.</p> <p><u>Pant Lasau SNCI</u> Distance and Direction: Approximately 120 m south Description: Supporting the habitats: native wet woodland, lowland mixed deciduous woodland, gorse stands, lowland fen, structurally-diverse and species-rich scrub, purple moor-grass and rush pasture, and watercourse with exposure/erosion features; and a number of Section 7 listed invertebrate and bird species.</p> <p><u>Cefn Forest Stream SNCI</u> Distance and Direction: Approximately 230 m south west Description: Supporting the habitats: woodland containing ancient woodland indicator species, upland mixed ash woodland, native</p>

Designation /Feature	Description
	<p>wet woodland, lowland mixed deciduous woodland, lowland meadow, species-rich neutral grassland, structurally-diverse and species-rich scrub, degraded lowland heath, lowland fen, purple moor-grass and rush pasture, ponds, and watercourse with exposure/erosion features; and a number of Section 7 listed invertebrate and bird species, and the Schedule 1 listed bird barn owl.</p> <p><u>Lower Lliw Resivoir SNCI</u> Distance and Direction: Approximately 460 m north Description: Supporting the habitats: woodland containing ancient woodland indicator species, gorse stands, species-rich bracken, structurally-diverse and species-rich scrub, purple moor-grass and rush pasture, and watercourse with exposure/erosion features; and a number of Section 7 listed invertebrate and bird species, and the Schedule 1 listed birds kingfisher <i>Alcedo atthis</i>, merlin <i>Falco columbarius</i> and red kite.</p> <p><u>Middle Lliw SNCI</u> Distance and Direction: Approximately 670 m north west Description: Supporting the habitats: ancient semi-natural woodland, woodland containing ancient woodland indicator species, structurally-diverse and species-rich scrub, gorse stands, species-rich neutral grassland, semi-improved lowland dry acid grassland, acid grassland with anthills, purple moor-grass and rush pasture, watercourse with exposure/erosion features, and species-rich bracken; and a number of Section 7 listed invertebrate species.</p> <p><u>Cilfaen SNCI</u> Distance and Direction: Approximately 760 m north west Description: Supporting the habitats: wet woodland, woodland containing ancient woodland indicator species, and purple moor-grass and rush pasture.</p>
<p>Designated Sites within 10 km designated for bats</p>	<p>There are no sites designated for bats within 10 km of the Project Site.</p>
<p>Protected and Priority Species Records from the last 10 years within 2 km</p>	<p>The following species have been recorded within 2 km of the Project Site in the last 10 years:</p> <p>Plants: Cornflower <i>Centaurea cyanus</i>, bluebell <i>Hyacinthoides non-scripta</i>.</p> <p>Invertebrates: Dusky brocade <i>Apamea remissa</i>, minor shoulder-knot <i>Brachylomia viminalis</i>, broom moth <i>Ceramica pisi</i>, small phoenix <i>Ecliptopera silaceata</i>, dingy skipper <i>Erynnis tages</i>, marsh fritillary <i>Euphydryas aurinia</i>, rustic <i>Hoplodrina blanda</i>, shoulder-striped wainscot <i>Leucania comma</i>, buff ermine <i>Spilosoma lutea</i>, blood-vein <i>Timandra comae</i>.</p> <p>Amphibians: Common toad <i>Bufo bufo</i>, palmate newt <i>Lissotriton helveticus</i>, common frog <i>Rana temporaria</i>.</p>

Designation /Feature	Description
	<p>Reptiles: Slow-worm <i>Anguis fragilis</i>, grass snake <i>Natrix natrix</i>, adder <i>Vipera berus</i>, common lizard <i>Zootoca vivipara</i>.</p> <p>Birds: Lesser redpoll <i>Acanthis cabaret</i>, goshawk <i>Accipiter gentilis</i>, skylark <i>Alauda arvensis</i>, kingfisher <i>Alcedo atthis</i>, tree pipit <i>Anthus trivialis</i>, little ringed plover <i>Charadrius dubius</i>, ringed plover <i>Charadrius hiaticula</i>, black-headed gull <i>Chroicocephalus ridibundus</i>, cuckoo <i>Cuculus canorus</i>, lesser spotted woodpecker <i>Dendrocopos minor</i>, yellowhammer <i>Emberiza citronella</i>, reed bunting <i>Emberiza schoeniclus</i>, merlin <i>Falco columbarius</i>, peregrine <i>Falco peregrinus</i>, hobby <i>Falco Subbuteo</i>, kestrel <i>Falco tinnunculus</i>, pied flycatcher <i>Ficedula hypoleuca</i>, linnet <i>Linaria cannabina</i>, grasshopper warbler <i>Locustella naevia</i>, common crossbill <i>Loxia curvirostra</i>, common scoter <i>Melanitta nigra</i>, red kite <i>Milvus milvus</i>, spotted flycatcher <i>Muscicapa striata</i>, curlew <i>Numenius arquata</i>, osprey <i>Pandion haliaetus</i>, house sparrow <i>Passer domesticus</i>, wood warbler <i>Phylloscopus sibilatrix</i>, willow tit <i>Poecile montana</i>, marsh tit <i>Poecile palustris</i>, dunnock <i>Prunella modularis</i>, bullfinch <i>Pyrrhula pyrrhula</i>, starling <i>Sturnus vulgaris</i>, redwing <i>Turdus iliacus</i>, song thrush <i>Turdus philomelos</i>, fieldfare <i>Turdus pilaris</i>, barn owl <i>Tyto alba</i>, lapwing <i>Vanellus vanellus</i>.</p> <p>Bats: Bat species <i>Chiroptera</i>, unidentified bat <i>Myotis</i>, Daubenton's <i>Myotis daubentonii</i>, Natterer's <i>Myotis nattereri</i>, Noctule <i>Nyctalus noctule</i>, pipistrelle species <i>Pipistrellus</i>, common pipistrelle <i>Pipistrellus pipistrelles</i>, soprano pipistrelle <i>Pipistrellus pygmaeus</i>, long-eared species <i>Plecotus</i>, brown long-eared <i>Plecotus auritus</i>.</p> <p>Mammals (excluding bats): West European hedgehog <i>Erinaceus europaeus</i>, European otter <i>Lutra lutra</i>, Eurasian badger <i>Meles meles</i>, polecat <i>Mustela putorius</i>.</p>
Priority Habitats and Species – Section 7 List	The full list of Section 7 Habitats and Species of Principle Importance in Wales has been reviewed. Those priority habitats present on site and priority species with potential to be on site are listed in Table 4-2 and Table 4-3 respectively.
Surrounding Land Use	<p>The Project Site is located to the north of Junction 46 of the M4 Motorway close to the village of Felindre, Swansea.</p> <p>The Project Site has agricultural fields to the east, south and north. Areas of woodland are located to the south, east and west of the Project Site. Areas of the Felindre Gas Compressor Station with associated roads and buildings are partially within and adjacent to the Project Site boundary. A waste water treatment works is located in the north west outside of the Project Site boundary.</p>
Ancient Woodland	<p>The following five areas have been identified:</p> <ul style="list-style-type: none"> • An 8.1ha area of RAWs within and adjacent to the Project Site boundary towards the south west; • A 15.1 ha area of ASWU within and adjacent to the Project Site boundary in the south west. Part of this ASWU area covers the Felindre Gas Compressor Station;

Designation /Feature	Description
	<ul style="list-style-type: none"> • A 0.9 ha area of PAWS adjacent to the Project Site boundary towards to the south west; • An 4.3 ha area of RAWs adjacent to the Project Site boundary; and, • A 1.6 ha ASNW adjacent to the Project Site boundary in the east. This area is also subject to TPOs.
Tree Protection Orders (TPOs)	Swansea County Council advised that there is a small area of ASNW woodland covered by TPOs which is adjacent to the Project Site boundary to the east.
Ponds within 500m	<p>OS mapping shows 25 Ponds within 500 m of the Project Site boundary, three of these (Ponds 16,22 and 23) are within the Project Site boundary:</p> <ul style="list-style-type: none"> • Ponds 1 – 8: Located near to a waste water treatment works approximately 350m west. Connected to the Site via woodland and grassland; • Ponds 9, 10 and 21: Located approximately 350m east and connected to the north-east tip of the road boundary via grassland; • Pond 11: Approximately 210 m west of the Project Site boundary and connected to the Site via grassland and scrub; • Ponds 12 – 14 and 18: Located approximately 450 m east and connected to the Site via woodland and grassland; • Pond 15: Located approximately 130 m north and connected to the Site via woodland and grassland; • Pond 16: Within the Project Site boundary, dry during the Phase 1 Habitat Survey; • Pond 17: Located approximately 200 m west and connected to the Site via woodland, grassland and scrub; • Ponds 19a and 19b: Approximately 400 m north and connected to the Site via grassland; • Pond 20: Approximately 450 m north, connected to the Site via grassland. This pond was identified as dry during the Phase 1 Habitat Survey; • Pond 22: Within the Project Site boundary; • Pond 23: Within the Project Site boundary and identified during the Phase 1 Habitat Survey (Appendix B: Target Note 28). This pond was not accessible due to the presence of horses; and, • Pond 24: Approximately 150 m north within the garden of Pen-y-Waun Fach Cottage. The pond is connected to the Site via grassland and woodland.
Previous Surveys	The client provided AECOM with the reports of previous surveys undertaken by BSG Ecology and WSP/PB within the Site (Ref. 5, Ref. 8, and Ref. 9). It was noted that the current red line boundary of the Site is now smaller than the red line boundary used by BSG Ecology and WSP/PB. However, the current red line boundary is

Designation /Feature	Description																								
	<p>within the same area as the previous red line boundary provided to BSG Ecology and WSP/PB and therefore the surveys undertaken would have captured the current Project Site boundary.</p> <p>A summary of the previous protected and priority species surveys are detailed below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="color: #00AEEF;">Species</th> <th style="color: #00AEEF;">Year</th> <th style="color: #00AEEF;">Summary Results</th> <th style="color: #00AEEF;">Company</th> </tr> </thead> <tbody> <tr> <td>Invertebrates (moths, marsh fritillary (adult and larval stages), terrestrial <i>Coleoptera</i>, and aquatic macroinvertebrates (in ponds and watercourses)</td> <td>2014</td> <td>No protected species identified. A total of 384 species were recorded from the Survey Site. One species is Red Data Book. Two are nationally scarce and fourteen are Section 7 species.</td> <td>BSG Ecology</td> </tr> <tr> <td>Great Crested Newts (GCN) <i>Triturus cristatus</i></td> <td>2014</td> <td>No GCN Identified within five ponds surveyed. Palmate newts and smooth newts <i>Lissotriton vulgaris</i> were found.</td> <td>BSG Ecology</td> </tr> <tr> <td>Reptiles</td> <td>2014</td> <td>A peak count of 50 common lizard and a peak count of five grass snake were identified within the Site.</td> <td>BSG Ecology</td> </tr> <tr> <td>Breeding Birds (including barn owl)</td> <td>2014</td> <td>Nine Section 42 (now Section 7) bird species considered likely to breed on Site. Two Schedule 1 species, red kite and peregrine falcon recorded. No evidence of schedule 1 species breeding within the Project Site. No evidence of barn owl within the Project Site.</td> <td>BSG Ecology</td> </tr> <tr> <td>Hazel Dormouse <i>Muscardinus avellanarius</i></td> <td>2014</td> <td>No dormice recorded from targeted surveys between June and November 2014.</td> <td>BSG Ecology</td> </tr> </tbody> </table>	Species	Year	Summary Results	Company	Invertebrates (moths, marsh fritillary (adult and larval stages), terrestrial <i>Coleoptera</i> , and aquatic macroinvertebrates (in ponds and watercourses)	2014	No protected species identified. A total of 384 species were recorded from the Survey Site. One species is Red Data Book. Two are nationally scarce and fourteen are Section 7 species.	BSG Ecology	Great Crested Newts (GCN) <i>Triturus cristatus</i>	2014	No GCN Identified within five ponds surveyed. Palmate newts and smooth newts <i>Lissotriton vulgaris</i> were found.	BSG Ecology	Reptiles	2014	A peak count of 50 common lizard and a peak count of five grass snake were identified within the Site.	BSG Ecology	Breeding Birds (including barn owl)	2014	Nine Section 42 (now Section 7) bird species considered likely to breed on Site. Two Schedule 1 species, red kite and peregrine falcon recorded. No evidence of schedule 1 species breeding within the Project Site. No evidence of barn owl within the Project Site.	BSG Ecology	Hazel Dormouse <i>Muscardinus avellanarius</i>	2014	No dormice recorded from targeted surveys between June and November 2014.	BSG Ecology
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Hazel Dormouse <i>Muscardinus avellanarius</i>	2014	No dormice recorded from targeted surveys between June and November 2014.	BSG Ecology																						

Designation /Feature	Description		
	Otter	2014	Otter spraint identified within the Project Site. BSG Ecology
	Water vole <i>Arvicola amphibius</i>	2014	Holes that were likely to be mammal burrows were observed. The holes have the right dimensions to allow use by water voles, but did not show signs of current occupation. No latrines, footprints or grazing lawns were observed during the survey. BSG Ecology
	Bats	2014	<p>At least seven species of bats were recorded during transect surveys; common pipistrelle, soprano pipistrelle, Myotis sp., long-eared bat., noctule, Leisler’s bat, and lesser horseshoe bat. All of these species and an additional three were recorded during automated bat detector surveys; Nathusius’ pipistrelle, serotine, and greater horseshoe bat. BSG Ecology</p> <p>Roost surveys of buildings within the survey Site confirmed that at least three buildings contained bat droppings and were used as bat roosts. Droppings from at least three species of bats (pipistrelle sp., long-eared bat sp. and lesser horseshoe bat) were found. Thirty three trees were located within the survey Site that were considered to have potential to support roosting bats.</p> <p>Emergence and /or re-entry surveys were carried out on eight trees all of which would potentially be directly affected by the Project. No bats were</p>

Designation /Feature	Description
	recorded emerging from or entering these potential tree roosts.
Invasive Species	2014 Japanese knotweed <i>Fallopia japonica</i> , Himalayan balsam <i>Impatiens glandulifera</i> , rhododendron <i>Ericaceae</i> species, floating pennywort <i>Hydrocotyle ranunculoide</i> and montbretia <i>Crocsmia x crocosmifolia</i> identified within the Project Site boundary. BSG Ecology
Invasive Species	2017 Himalayan balsam, Japanese knotweed, montbretia, Japanese rose <i>Rosa rugosa</i> and rhododendron. Identified within the Project Site boundary. WSP/PB

4.2 Extended Phase 1 Habitat Survey

4.2.1 The habitats present within the Project Site boundary and their descriptions are shown in Table 4-2. A plan of the Site showing the location and distribution of these habitats is shown in Figure 1.

Table 4-2: Phase 1 Habitats and Descriptions

Habitat	Description	Section 7 Habitat
Broadleaved Woodland – Semi-Natural	There are areas of semi-natural broadleaved woodland, including areas of RAWs and ASWU, within the Project Site. There is an areas of wet woodland. Species include; oak species <i>Quercus</i> , silver birch <i>Betula pendula</i> , rowan <i>Sorbus</i> sp., honeysuckle <i>Lonicera periclymenum.</i> , holly <i>Ilex aquifolium</i> , alder <i>Alnus glutinosa</i> , hazel <i>Corylus avellana</i> , goat willow <i>Salix caprea</i> , willow species <i>Salix</i> sp. and bramble <i>Rubus fruticosus</i> with a ground flora including broad buckler fern <i>Dryopteris dilatata</i> , hard fern <i>Blechnum spicant</i> , male fern <i>Dryopteris filix-mas</i> , pignut <i>Conopodium majus</i> , lesser celandine <i>Ficaria verna</i> and native bluebell, herb Robert <i>Geranium robertianum</i> and wild strawberry <i>Fragaria vesca</i> .	Yes
Broadleaved Woodland – Plantation	There is one small area of broadleaved plantation woodland located within National Grid Compound in the south of the Project Site. Species include; silver birch, alder, willow species, and bramble. Trees with the potential to support roosting bats are	Yes

Habitat	Description	Section 7 Habitat
	described in Table 4-5	
Scrub – Dense/Continuous	There are several areas of dense scrub, predominantly found in the south of the Project Site, but with one area in the north and one in the centre of the Project Site. Species include; bramble, willow species, gorse <i>Ulex europaeus</i> and bracken <i>Pteridium aquilinum</i> (Appendix C: Photographs 19 and 23 – 34).	No
Scrub – Scattered	Several areas of scattered scrub are found within the south of the Project Site. Species include; gorse, silver birch, willow species, hawthorn <i>Crataegus monogyna</i> and bramble.	No
Rows of Trees – Broadleaved	Rows of trees are predominantly located in between grassland fields and along road edges. The majority of these are located on top of earth banks constructed with stone and earth and covered in grass. Species include silver birch, oak species, hawthorn and holly, with a ground flora including native bluebell, dog violet <i>Viola riviniana</i> , herb Robert, cleavers <i>Galium aparine</i> and sweet vernal grass <i>Anthoxanthum odoratum</i> (Appendix C: Photographs 19 and 26)	No
Standalone Trees	There are 13 standalone trees within the Site: <ul style="list-style-type: none"> • A pedunculate oak <i>Quercus robur</i>, 12 m in height with a diameter at breast height (DBH) of 0.7 m; • An oak species, 13 m in height with a DBH of 0.6 m; • A holly 10 m in height with a DBH of 0.3 m; • A holly 10 m in height with a DBH of 0.3 m; • An oak species 14 m in height with a DBH of 0.7 m; • An oak species 11 m in height with a DBH of 0.4 m; • An ash 8 m in height with a DBH of 0.3 m; • An oak species 12 m in height with a DBH of 0.5 m; • An oak species 9 m in height with a DBH of 0.3 m; • An oak species 11 m in height with a DBH of 0.5 m; • A pedunculate oak 12 m in height with a DBH of 1 m; • A pedunculate oak 12 m in height with a DBH of 1 m; and, • An oak species 9 m in height with a DBH of 0.6 m. <p>Trees with the potential to support roosting bats are described in Table 4-5.</p>	No
Ruderal – Tall Herb and Fern	There are two areas of tall ruderal vegetation. Species include bracken and nettle <i>Urtica dioica</i> .	No
Semi-Improved Neutral	There is semi-improved neutral grassland present on road and track sides both within and adjacent to the Project Site	Yes

Habitat	Description	Section 7 Habitat
Grassland	<p>boundary. There are several semi-improved grassland fields within the centre of the Project Site.</p> <p>Semi-improved grassland species include; red fescue <i>Festuca rubra</i>, common vetch <i>Vicia sativa</i>, ribwort plantain <i>Plantago lanceolata</i>, sweet vernal grass, coltsfoot <i>Tussilago farfara</i>, marsh thistle <i>Cirsium palustre</i>, hard rush <i>Juncus inflexus</i>, compact rush <i>Juncus conglomeratus</i>, bird's foot trefoil <i>Lotus corniculatus</i>, black medic <i>Medicago lupulina</i>, perennial rye grass <i>Lolium perenne</i>, red clover <i>Trifolium pratense</i>, common mouse-ear <i>Cerastium fontanum</i>, Yorkshire fog <i>Holcus lanatus</i> and common bent <i>Agrostis capillaris</i> (Appendix C: Photographs 19, 21 and 24 – 25).</p>	
Marshy Grassland	<p>There are frequent areas of marshy grassland dominated by soft rush <i>Juncus effusus</i> and purple moor grass <i>Molinia caerulea</i> both within the Project Site boundary. Marshy grassland areas are predominantly located towards the south of the Project Site.</p>	Yes
Improved Grassland	<p>Areas of improved grassland are dominant throughout the Project Site. The majority of these are sheep and horse grazed. Species include; perennial rye grass, annual meadow grass <i>Poa annua</i>, sweet vernal grass and clover species (Appendix C: Photographs 19 – 20 and 26).</p>	No
Running Water	<p>There are several wet ditches (watercourses) across the Project Site (Appendix C: Photograph 26).</p>	No
Standing Water	<p>There are three ponds within the Project Site boundary (Appendix B: Target Notes 28, 40 and 44).</p>	Yes
Hedgerow with Trees – Species – Rich	<p>There is one native species-rich hedgerow alongside the access road to the National Grid site. Species include oak species, ash <i>Fraxinus excelsior</i>, hazel, honeysuckle, dog rose <i>Rosa canina</i>, field maple <i>Acer campestre</i>, holly and goat willow (Appendix C: Photograph 22).</p>	Yes
Hedgerow with Trees – Species – Poor	<p>There is one species-poor hedgerow within the Project Site boundary. Species include oak, ash, rowan, hawthorn, bramble and dog rose with a ground flora which includes native bluebell.</p>	Yes
Intact Hedgerow – Species – Poor	<p>There are two intact species-poor hedgerows. Species include hawthorn, blackthorn <i>Prunus spinosa</i>, bramble, hazel, willow species, holly, rose species, oak species, and ash.</p>	Yes
Earth Bank	<p>There are several grass covered raised earth banks within the Project Site. The earth banks comprise earth and stone. Some of these have scattered hawthorn and holly bushes with native bluebells on top of them. The earth banks with rows of trees on top are captured under the row</p>	No

Habitat	Description	Section 7 Habitat
	of trees category.	
Buildings	There are two buildings within the National Grid Compound within the south of the Project Site boundary; these buildings were not assessed for bats due to restricted access. Four buildings (outside of the Project Site boundary) were identified as having the potential to support roosting bats. Further detail is given in Section 4.5 (Appendix C: Photographs 7 – 17).	No
Fences	There is frequent fencing including security and barbed wire fencing throughout the Project Site. The fences have no ecological value.	No
Bare Ground (Hard Standing)	Areas of gravel, asphalt road and pedestrian pavements are located across the Project Site. These have no ecological value.	No

4.3 Protected and Priority Species

4.3.1 Details of protected and priority species recorded on Project Site are shown in Table 4-3. A plan of the Project Site showing the location and distribution of features with potential for protected or priority species is shown in Figure 1. Target notes of protected species evidence or features that have potential to support protected species are shown in Figure 1 and Appendix B.

Table 4-3: Protected and Priority Species Potential

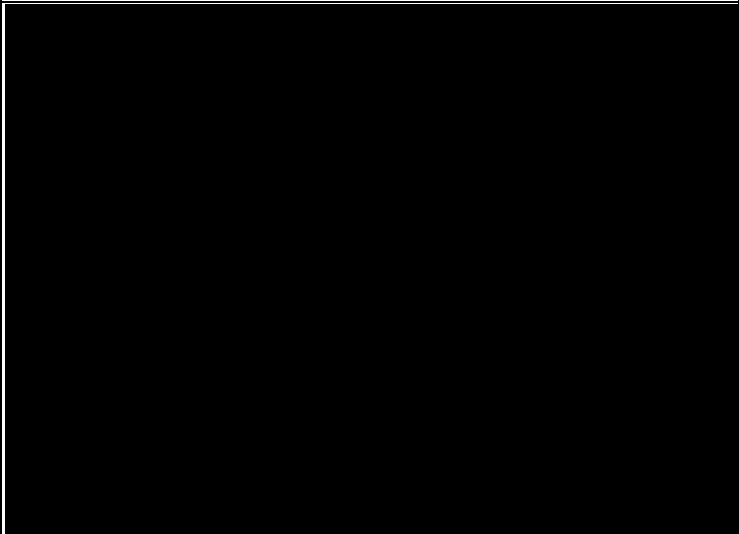
Species/Species Group	Associated habitat	Description	Section 7 Species
Invertebrates	All natural habitats	All of the natural habitats on Project Site have the potential to support generalist aquatic and terrestrial invertebrates as well as some scarce invertebrates as previously identified in 2014 (see Table 4-1). Records of marsh fritillary were returned from the local records centre. The NVC survey undertaken by BSG Ecology in 2014 identified devil’s bit scabious (the marsh fritillary larvae’s main food source) within an area which now lies outside of the Project Site boundary and there is no reference to this plant growing anywhere else within the Project Site (Ref. 8). Subsequent targeted surveys for marsh fritillary butterfly within the area where devils bit scabious was identified were undertaken by BSG Ecology in 2014. BSG Ecology did not find any evidence of marsh fritillary butterfly (Ref. 8).	Yes

Species/Species Group	Associated habitat	Description	Section 7 Species
		<p>The WSP/PB updated PEA report did not find any evidence of devil’s bit scabious within the Project Site, however it was noted that the PEA was conducted outside of this plants flowering period of July to October and may have gone unrecorded. It stated that there may still be suitable areas within the Project Site in which devil’s bit scabious may be found (Ref. 5).</p> <p>Devil’s bit scabious typically grows in damp meadows and marshes and along woodland rides and riverbanks.</p> <p>Areas of semi-improved neutral grassland and marshy grassland are present within the Project Site. Therefore there is the potential for devil’s bit scabious to be present, however it is considered that even if this plant is now present within the Project Site it is unlikely to be in any great number and therefore it is considered unlikely that marsh fritillary butterfly will be present.</p>	
Amphibians (including GCN)	Running water and ponds, marshy grassland and woodland.	<p>These habitats are suitable for supporting generalist amphibians, including frogs, toads and smooth and palmate newts.</p> <p>Areas of slow running water and ponds have the potential to support breeding GCN.</p> <p>Areas of marshy grassland and woodland have the potential to support GCN using these areas to commute to ponds as well as providing suitable habitat for foraging and hibernation during the terrestrial phase of their life cycle.</p> <p>No GCN have been recorded previously at the Project Site (see Table 4-1) and no records of GCN were identified from the local records centre.</p>	Yes
Reptiles	Semi-improved and marshy grassland, dense and scattered scrub, row of trees, earth banks, wood piles, gabion cage semi-natural broadleave	<p>Semi-improved and marshy grassland, dense and scattered scrub has the potential to support foraging reptiles (Appendix B: Target Notes 7, 12, 14, 18, 20, 31, 32, 36 – 38)</p> <p>Row of trees on earth banks which occur near to woodland or semi-improved grassland may support foraging reptiles and the earth banks with stones have the potential to provide areas for basking as well as shelter and hibernation opportunities (Appendix B: Target Note 39).</p> <p>Wood piles have the potential to provide shelter, hibernation and basking opportunities (Appendix B: Target Notes 8 and 30).</p> <p>The gabion cage has the potential to provide shelter, and hibernation opportunities (Appendix B:</p>	Yes

Species/Species Group	Associated habitat	Description	Section 7 Species
	d woodland, running water and ponds.	<p>Target Note 19).</p> <p>Semi-natural broadleaved woodland, hedgerows and scrub have the potential to support foraging reptiles as well as providing suitable habitat for shelter and hibernation (Appendix B: Target Notes 12 and 13)</p> <p>Clearings within the semi-natural broadleaved woodland have the potential to support basking reptiles.</p> <p>Running water, ponds and marshy grassland have the potential to provide foraging opportunities for grass snake.</p> <p>The surveys carried out by BSG Ecology in 2014 identified populations of common lizard and grass snake within the Project Site (see Table 4-1).</p>	
Breeding Birds	Semi-natural and plantation woodland, rows of trees, standalone trees, species – rich and species - poor hedgerows, dense and scattered scrub and marshy and semi-improved grassland.	<p>Semi-natural and plantation woodland, rows of trees, standalone trees, species –rich and species-poor hedgerows, dense and scattered scrub and grassland have the potential to support breeding birds.</p> <p>Redpoll, goldcrest <i>Regulus regulus</i>, blackcap <i>Sylvia atricapilla</i>, robin <i>Erithacus rubecula</i>, blue tit <i>Cyanistes caeruleus</i>, wren <i>Troglodytes troglodytes</i>, blackbird <i>Turdus merula</i>, cuckoo and bullfinch were heard during the Phase 1 Habitat Survey (Appendix B: Target Notes 2 and 5).</p> <p>Marshy and semi-improved grassland has the potential to support ground nesting birds, such as lapwing (Appendix B: Target Note 22) and snipe <i>Gallinago gallinago</i>. Records of barn owl, goshawk, red kite and peregrine were returned by the local records centre. The breeding bird survey undertaken in 2014 by BSG Ecology did not find any evidence of these species breeding within the Project Site boundary (see Table 4-1).</p> <p>However, it is possible that these species may now be breeding on Project Site.</p>	Yes
Bats	Semi-natural and plantation woodland, rows of trees, standalone trees, species – rich and	<p>Trees in semi-natural and plantation woodland and rows of trees, and standalone trees have the potential to support roosting, foraging and commuting bats (Appendix B: Target Notes 29, 35 and 36).</p> <p>Species-rich and species-poor hedgerows, dense and scattered scrub, and running water have the potential to support foraging and commuting bats.</p> <p>Marshy and semi-improved grassland and ponds have the potential to support foraging bats.</p>	Yes

Species/Species Group	Associated habitat	Description	Section 7 Species
	<p>species poor hedgerows, dense and scattered scrub and marshy and semi-improved grassland, running water and ponds. Buildings.</p>	<p>The Project Site was assessed as having High commuting and foraging potential (see Table 3-2). Eleven trees were assessed as having the potential to support roosting bats (see Table 4-5). Not all trees close to the Project Site boundary were assessed for their potential to support roosting bats. The majority of trees within the woodlands close to or adjacent to the Project Site boundary were not assessed for their potential to support roosting bats. However, it was noted that the trees within area of woodland are of a suitable age and size to support bat roost potential features. Four buildings (outside of the Project Site boundary) were assessed as having the potential to support roosting bats (see Table 4-5),</p> <p>Bat surveys undertaken by BSG Ecology in 2014 identified the following (Ref. 9): <i>Internal and External Building Inspection</i></p> <ul style="list-style-type: none"> • Building 4 (not assessed during the AECOM PEA due to landowner access refusal) – Confirmed roost. Long-eared, pipistrelle and lesser horseshoe bat droppings identified in the store room; • Building 8 (AECOM Building 2) – Confirmed bat roost. Long-eared and pipistrelle bat droppings identified in both the first and second storey at the north of the building; • Building 10 (not assessed during the AECOM PEA, outside of the Project Site boundary). Pipistrelle bat droppings identified on the floor; • Buildings 1, 2, 5 and 11 (not assessed during the AECOM PEA, outside of the Project Site boundary) were assessed as having Moderate potential; • Building 7 (AECOM Building 3) was assessed as having Low potential; and, • Building 3, 6 and 9 (not assessed during the AECOM PEA, outside of the Project Site boundary) were assessed as having negligible potential. <p>No further bat surveys were undertaken on buildings as BSG Ecology stated that they would not be affected by the development proposals.</p> <p><i>Foraging and Commuting</i></p>	

Species/Species Group	Associated habitat	Description	Section 7 Species
		<p>Common and soprano pipistrelle, myotis species, noctule, Leisler’s and long-eared bat species were identified during the walked transects and static bat detector surveys:</p> <p>One record of lesser horseshoe bat in the south of the Project Site was recorded during the walked transect.</p> <p>In addition to the species listed above Serotine, Nathusius’ pipistrelle and greater horseshoe were identified during the static bat detector surveys.</p> <p>The most frequently occurring species across the Project Site were common and soprano pipistrelle. The majority of the bat activity was recorded along hedgerows and treelines within the Project Site. The areas identified during the static detector bat surveys with the highest levels of bat activity were located in the south of the Project Site.</p>	
Brown Hare <i>Lepus europaeus</i>	Semi-improved and marshy grassland and woodland	<p>Semi-improved and marshy grassland and woodland habitats have the potential to support breeding, foraging and commuting brown hares.</p> <p>A brown hare was observed within semi-improved grassland by AECOM Ecologists when undertaking GCN surveys (Appendix B: Target Note 43).</p>	Yes
Hazel Dormouse	Semi-natural and plantation woodland, rows of trees, dense and scattered scrub, species-poor and species-rich hedgerows.	<p>Semi-natural and plantation woodland, rows of trees, dense and scattered scrub, species-poor and species-rich hedgerows have the potential to support breeding and foraging dormice (Appendix B: Target Notes 9 and 34 – 35).</p> <p>The dormouse surveys carried out by BSG Ecology in 2014 did not find any evidence of dormice (see Table 4-1).</p>	Yes
European Hedgehog	Semi-natural and plantation woodland, species-rich and species-poor hedgerows, dense and	<p>Semi-natural and plantation woodland, species-rich and species-poor hedgerows dense and scattered scrub has the potential to support hibernating, foraging and commuting hedgehogs.</p> <p>Woodpiles have the potential to support hibernating hedgehogs.</p> <p>Marshy grassland and semi-improved grassland has the potential to support foraging and commuting hedgehogs.</p>	Yes

Species/Species Group	Associated habitat	Description	Section 7 Species
	scattered scrub, marshy grassland and semi-improved grassland and woodpiles.		
Badger	Semi-natural and plantation woodland, rows of trees, species-rich and species-poor hedgerows, dense and scattered scrub, marshy grassland and semi-improved and improved grassland.		0
Polecat	Semi-natural and plantation woodland, rows of trees, species-rich and species-poor hedgerows, dense and scattered scrub and semi-improved and improved	<p>These habitats have the potential to support foraging polecats. Polecat's food sources include rabbits, rats, birds and frogs which are likely to be present within the Project Site boundary.</p> <p>Six records of polecat were returned within 2 km of the Project Site from the local records centre.</p> <p>Piles of wood (Appendix B: Target Notes 8 and 30), woodland and any areas where rabbit burrows are present have the potential to support breeding polecat.</p>	Yes

Species/Species Group	Associated habitat	Description	Section 7 Species
	grassland. Wood Piles.		
Otter	Semi-natural broad-leaved woodland, marshy grassland and running water.	<p>Semi-natural broadleaved woodland which contains or is close to running water has the potential to support breeding as well as foraging and commuting otter.</p> <p>Running water and marshy grassland have the potential to support foraging and commuting otter.</p> <p>Otters are known to be in the area as spraints have been identified outside of the Project Site boundary during protected species surveys carried out by AECOM in 2017.</p> <p>One otter spraint was identified during the BSG Ecology surveys in 2014 (See Table 4-1).</p>	Yes
Water Vole	Running water, marshy grassland and semi-improved grassland.	<p>Running water, marshy grassland and semi-improved grassland provides suitable habitat for water vole.</p> <p>Previous surveys undertaken by BSG Ecology have identified mammal burrows that could be water vole burrows (see Table 4-1).</p>	Yes

4.4 Invasive Species Subject to Legal Controls

4.4.1 Invasive species subject to legal controls were identified on the Project Site at the time of survey and are and are shown in Table 4-4 and on Figure 1. Not all areas of the Site were assessed for invasive species during the Phase 1 Habitat Survey due to access limitations. There is the potential for invasive species to have gone unrecorded in these areas.

Table 4-4: Invasive Species Subject to Legal Controls

Invasive Species Point	Species	Description
1	Rhododendron	5 x 6 m in size.
2	Japanese knotweed	Within hedgerow 5 m long by 1 m wide and 2 m high.
3	Japanese knotweed	On the edge of the road 2x1x2 m in size.
4	Japanese knotweed	Along the edge of a small area of woodland. 10x1x2 m in size (Appendix C: Photograph 18).
5	Rhododendron	Within woodland. 2x2x1 m in size.
6	Rhododendron	1x1x1 m in size.
7	Japanese knotweed	On bank 1x1x2 m in size.

Invasive Species Point	Species	Description
8	Japanese knotweed	Outside of the Project Site boundary. Roots could be inside the Project Site boundary.
9	Japanese knotweed	Occurring throughout the row of trees.
10	Japanese knotweed	Located in the centre of the field which is outside of the Project Site boundary and had no access. Viewed from the road.
11	Japanese knotweed	Within an area of improved grassland. 15x4m in size.
12	Japanese knotweed	4x5 m in size.
13	Himalayan balsam	Large extent of stands along woodland edge and within grassland. There are some scattered stands within the woodland.
14	Himalayan balsam	Young plants throughout scrub/tree line.

4.5 Bat Roost Assessment

4.5.1 Features suitable for supporting roosting bats were assessed during the site visit and are shown in Table 4-5. The locations of potential roosts are shown on Figure 1. Due to time and access constraints during the Phase 1 Habitat Survey, not all trees within the Project Site boundary, not all trees within woodland parcels in close proximity to the Project Site boundary and not all buildings in close proximity to the Project Site boundary were assessed for their potential to support roosting bats.

Table 4-5: Features Assessed as Having Potential to Support Roosting Bats

Feature	Description	Bat Roost Potential Category
Building 1	Approximately 120 m outside of the Project Site boundary to the north east. This was not fully assessed due to time constraints of the PEA survey. This is a modern building with a tiled roof. There were no obvious gaps. House sparrows were observed using spaces in the roof.	Low
Building 2	Approximately 75 m outside of the Project Site boundary to the west. A brick built building with a tower and asbestos pitched roof. There are fly-in access and crevice points (Appendix C: Photographs 7 – 11).	High BSG Ecology confirmed this as a roost in 2014 (Ref. 9).
Building 3	Approximately 5 m outside of the Project Site boundary to the west. A brick built building with a pitched asbestos roof. There are gaps in the mortar and brick work and behind the wooden fascia boards (Appendix C: Photographs 12 – 15).	Moderate
Building 4	Approximately 10 m outside of the Project Site boundary to the west. A single story brick built building with gaps leading	Moderate

Feature	Description	Bat Roost Potential Category
	to a cavity wall. Gaps are present on the east and south face of this building (Appendix C: Photographs 16 – 17).	
Tree 1	Within the Project Site boundary. An oak species, 14 m in height with a DBH of 0.7 m. This tree has south facing split at 6 m (Appendix C: Photograph 1).	Low
Tree 2	Within the Project Site boundary. An oak species, 12 m in height with a DBH of 0.6 m. This tree had dense ivy cover which could be obscuring potential bat features. The ivy itself did not appear to be a suitable feature for use by bats.	Low
Tree 3	Within the Project Site boundary. An oak species, 17 m in height with a DBH of 1.1 m. There is a knothole at 3 m facing north west and a crack in the limb at 5 m facing west.	Moderate
Tree 4	Approximately 55 m outside of the Project Site boundary to the south east. An oak species, 10 m in height with a DBH of 0.7 m. There is a hollow that extends for approximately 30 cm which could be used by a roost for a small number of bats.	Low
Tree 5	Approximately 20 m outside of the Project Site boundary to the south. An oak species, 14 m in height with a DBH of 0.8 m. A hollow at 0.5 m within the base of the tree (Appendix C: Photograph 2).	Low
Tree 6	Within the Project Site boundary. A pedunculate oak, 12 m in height with a DBH of 0.7 m. There is a spilt in the stem facing south towards the road and a woodpecker hole (Appendix C: Photograph 3).	Moderate
Tree 7	Within the Project Site boundary. A pedunculate oak, 8 m in height with a DBH of 1 m. There are splits in the stem facing west (Appendix C: Photograph 4).	Low
Tree 8	Within the Project Site boundary. An oak species, 12 m in height with a DBH of 0.6 m. There is a trunk cavity at 1.5 m, viewed from the road. The tree is located within an area of no access and the other side could not be viewed (Appendix C: Photograph 5).	Moderate
Tree 9	Within the Project Site boundary. An oak species 8 m in height with a DBH of 0.5 m. There are thick stems of ivy on the east face (Appendix C: Photograph 6).	Moderate
Tree 10	Approximately 25 m outside of the Project Site boundary to the east. A rowan 12 m in height with a DBH of 0.4 m. There is cavity approximately 1m from the ground which appears to extend upwards. There is currently an active wasp nest in the cavity which may deter bats from using it.	Moderate
Tree 11	Within the Project Site boundary. A multi-stem oak species 14 m in height with a DBH of 0.6 m. There is some loose bark	Low

Feature	Description	Bat Roost Potential Category
	and a gap in the base.	

5. Ecological Constraints and Indicative Potential Impacts

- 5.1.1 The constraints and potential impacts listed here do not include consideration of further surveys which have been recommended in Section 6. The results of further surveys may change the likely potential impacts.
- 5.1.2 The indicative potential impacts of the Project on habitats and protected species are outlined below; potential impacts will be assessed fully during the Ecological Impact Assessment (EclA).
- 5.1.3 The development proposals are for proposed 299 MW Open Cycle Gas Turbine power station. The development will require the removal of vegetated habitats including hedgerows, semi-natural broadleaved woodland, rows of trees, scrub, hardstanding, marshy grassland, improved grassland, and trees.

5.2 Indicative Potential Impacts

- 5.2.1 Without mitigation, during construction and operation the following indicative potential impacts are anticipated:
 - Habitat loss, severance and fragmentation;
 - Loss and/or disturbance of breeding and resting sites of protected species;
 - Disturbance, injury or killing of protected and priority species during site clearance and construction works;
 - Disturbance, injury or killing of protected and priority species during operation where protected species are retained within the Project Site;
 - Disturbance from noise and vibration (if piling is required);
 - Pollution to land and/or water as a result of run off of sediments, chemicals, fuel or oil;
 - Degradation of habitats and designated site habitats due to increases in nutrients from operational emissions;
 - Spread of invasive species; and,
 - External lighting disturbance.

6. Further Surveys and Recommendations

6.1 Further Surveys

6.1.1 Further surveys for protected species are recommended so that the baseline data can be used to inform the EclA. Surveys will be programmed and completed with sufficient time ahead of DCO application submission and the results can be used to inform the Project design. Certain species can only be surveyed for at certain times of year and without consideration this has potential to cause project delays.

6.1.2 Recommendations for further surveys are based on the current information available and will be subject to consultation with relevant consultees and local authority officers. Further surveys are recommended for the following species:

a) Hedgerows

6.1.3 Hedgerows proposed to be removed as part of the development should be assessed by a suitably qualified ecologist to determine if they are classified as an Important hedgerow under the Hedgerow Regulations, 1997 (Ref. 1). The optimal times for hedgerow surveys are April – early-June, whilst the woodland ground flora is still present.

b) Tree Preservation Orders

6.1.4 No TPOs are to be removed as part of the Project. However the TPOs may be impacted by the works. TPO trees that may be impacted by the Project should be identified and the appropriate Root Protection Zones should be set up during construction.

c) Invertebrates

6.1.5 As the habitats on the Project Site have not changed significantly since the invertebrate survey conducted in 2014 it is recommended that the consultation is undertaken with Natural Resources Wales (NRW) and the local planning authority to discuss the requirement for additional invertebrate surveys.

6.1.6 Should an update to the 2014 survey data be required by the NRW and the local planning authority it should be undertaken by a suitably qualified ecologist/entomologist to determine if the habitats proposed to be removed as part of the development support any protected and/or priority invertebrate species, including the marsh fritillary butterfly.

d) Great Crested Newts

6.1.7 It is recommended that surveys for great crested newts are undertaken on suitable ponds within the Project Site boundary, and within 500 m of the Project Site boundary to determine if they are present in the area.

e) Reptiles

- 6.1.8 It is recommended that presence/absence surveys for reptiles should be undertaken in areas of suitable habitat using artificial refugia.
- 6.1.9 Grass snake and common lizard have previously been identified on Project Site (see Table 4-1).

f) Breeding Birds

- 6.1.10 It is recommended that breeding bird surveys should be undertaken within suitable areas of habitat within the Site to assess presence, population and activity of birds. Particular focus will be paid to protected and/or priority species breeding in areas of suitable habitat and will include ground nesting birds, in particular lapwing, in areas of marshy and semi-improved grassland.

g) Bats

- 6.1.11 The Bat Survey Guidelines (Ref. 2) requires surveys to consider potential roosts (trees, buildings and structures) within the Zone of Influence (Zol) of a project. For the Generating Equipment Site in consideration of construction noise and vibration, and operational lighting to COMAH regulations the Zol has been set to a 50m radius from the Project Site boundary, and for the rest of the Site set to potential roosts within and adjacent to the Project Site boundary.

Tree Assessments

- 6.1.12 If broadleaved semi-natural woodland, rows of trees and /or individual trees within the Zol and Project Site are to be removed or illuminated by external lighting a preliminary ground level roost assessment should be undertaken on all trees within the area which will be affected.

Building and Structure Assessments

- 6.1.13 Buildings and/or structures within the vicinity of the Project Site should be assessed for their potential to support summer roosting and winter hibernating bats.

Bat Roost Survey

Trees

- 6.1.14 Any trees to be removed or disturbed (disturbance can include lighting, crown lifting, limb removal, noise and vibration) which have been assessed as having low potential to support roosting bats will not be subject to further surveys, but precautionary measures may be appropriate during felling or pruning activities.
- 6.1.15 Any trees to be removed or disturbed which have been assessed as having moderate or high potential to support roosting bats may require a further Potential Roost Feature (PRF) climbed inspection survey and/or will require presence/absence surveys to be undertaken.

- 6.1.16 To establish roost presence or likely absence up to three manual surveys (dusk/dawn) are to be completed following the Bat Survey Guidelines (Collins, 2016). The climbed inspection can count towards one of the three manual surveys.

Buildings and Structures

- 6.1.17 Any buildings or structures assessed as having potential to support roosting bats may require an internal inspection, winter hibernations survey, and/or will require presence/absence surveys to be undertaken if they are to be disturbed as part of the Project (disturbance can include lighting, renovation works, noise and vibration).
- 6.1.18 To establish roost presence or likely absence up to three manual surveys (dusk/dawn) are to be completed following the Bat Survey Guidelines (Ref. 2).
- 6.1.19 At least three surveys are needed to support a European Protected Species License application if a roost is to be destroyed or disturbed.

Activity Survey

- 6.1.20 To ascertain the presence and/or level of bat activity on the Project Site, activity surveys (including walked transects and automated/static activity surveys) are recommended to be completed following the Bat Survey Guidelines (Ref. 2).

Transect Surveys

- 6.1.21 This comprises two site visits a month, for each month between April and October inclusive for walked transects. Transects will incorporate all areas of suitable habitat. Particular focus will be on commuting bats using the hedgerows and tree lines. The transect route will depend on suitable and safe access. Due to the size of the Project Site it is anticipated that the Project Site will be covered by two walked transect routes.

Automated/Static Activity Surveys

- 6.1.22 This comprises three remote detector locations per transect with data to be collected on five consecutive nights per month, for each month between April and October inclusive. The devices will be placed out and retrieved after each session. Recordings are then analysed in the office.

h) Hazel Dormouse

- 6.1.23 Suitable habitat for supporting dormice was recorded within woodland, hedgerows and dense scrub. No records of dormice were returned from the local records centre. Surveys for dormice were undertaken by BSG Ecology in 2014 (Ref. 9) and no evidence of dormice was found.

- 6.1.24 The habitats on-site with the potential to support dormice are not considered to have changed since 2014, Therefore AECOM consider that no further surveys for dormice are necessary. However, a consultation with NRW and the local planning authority will be required to determine if this approach is appropriate. There may be a requirement to undertake further surveys for dormice in areas of suitable habitat on-site.
- 6.1.25 Should a dormouse survey need to be completed to ascertain presence or likely absence at the Project Site, the survey will follow the guidelines set out in the Dormouse Conservation Handbook Second Edition (Ref. 10).
- 6.1.26 Nest tubes will be positioned within areas of scrub woodland and along hedgerows suitable to support dormouse. The tubes will be checked monthly using a surveyor possessing a NRW dormouse handling licence for the presence of dormice and also for signs of recently constructed dormouse nests.
- 6.1.27 Based on survey methodologies provided in Ref. 10, it is recommended that surveys commence in May and are undertaken on a monthly basis until September. As shown in Table 6-1 below, each survey month is given an Index of Probability based on the likelihood of dormouse being present and active in each month. A minimum score of 20 is required to assume absence from the Site.

Table 6-1: Index of probability of finding dormice present in nest tubes in any one month

Month	Index of Probability (based on 50 tubes)
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

6.1.28 If dormice are confirmed present within the woodland on site then an application for a European Protected Species License (EPSL) will need to be made from NRW to allow works to be undertaken that would otherwise be in breach of legislation. The EPSL will contain a Method Statement describing how the works will proceed (likely to include timing of works, working methods and hand searching by a licensed ecologist) and mitigation measures. If an EPSL is required then the survey must include a survey in May to inform a population size class assessment, due to the timing of this PEA this would need to be undertaken in May 2018.

i) Badger

j) Otter and Water Vole

6.1.33 An otter and water vole survey should be undertaken along watercourses and ditches at least 100 m from the Project Site boundary (where access allows) to ascertain presence and distribution.

k) Invasive Non-Native Plant Species

6.1.34 Invasive non-native plant species were identified during the Phase 1 Habitat Survey. A survey for invasive non-native species should be undertaken in areas that could not be accessed during the Phase 1 Habitat Survey.

6.2 Recommendations for Further Work

a) Habitat Regulations Assessment – Screening

- 6.2.1 A search should be undertaken for any Natura 2000 sites situated within the 10 km study area. A Habitat Regulations Assessment (HRA) screening assessment should be undertaken to ascertain if the development proposals would have a Likely Significant Effects (LSE) on any Natura 2000 sites alone or in-combination with other projects, and therefore identifying whether an Appropriate Assessment (AA) is required. Consultation with NRW is recommended at early stages to discuss the proposals and suitable mitigation measures should these be required.
- 6.2.2 A HRA screening assessment was undertaken in 2015 by Parsons Brinckerhoff and concluded no LSE. It is recommended that the report is reviewed and, if deemed appropriate, consultation undertaken with NRW to ascertain whether the report can be used to support the DCO application. However, a new in-combination assessment will be required as there is a likelihood that new projects have been planned or built since the 2015 report was written.

6.3 Recommendations for Consultation

- 6.3.1 Development plans are likely to require the removal of SINC habitats and TPO trees, and may impact upon a number of protected and/or priority species, and designated sites. The following is a list of bodies that should be consulted:
- CCS Ecologist;
 - CCS Officer;
 - Natural Resources Wales; and,
 - Local wildlife groups.

6.4 Recommendations for Mitigation and Enhancement

6.4.1 A detailed list of recommendations has not been completed. Further recommendations will be made as a result of the further surveys and as part of the EclA.

6.4.2 The mitigation hierarchy should be considered and implemented when designing a new development.

a) Mitigation Hierarchy

1. Enhance positive impacts and opportunities;
2. Avoidance – Alternative site or technology, or timing to eliminate impact;
3. Minimise – Actions during design construction and operation to minimise or eliminate impacts; and
4. Compensation – Used as last resort to offset impacts.

b) Habitat Loss, Severance and Fragmentation

6.4.3 Avoid removal of habitats where possible. The following are of particular importance as they are listed as priority habitats under the Section 7 of the Environment (Wales) Act 2016. The Act places a duty on public authorities to ‘seek to maintain and enhance biodiversity’ of types of habitat included in on the Section 7 list, and encourage others to take such steps:

- Woodland;
- Semi-improved grassland;
- Marshy grassland;
- Standing water; and,
- Hedgerows.

c) Loss and/or Disturbance of Breeding and Resting sites of Protected Species

6.4.4 Further surveys will confirm the presence of any breeding or resting sites. Disturbance, destruction, or obstruction of breeding or resting sites for European Protected Species (EPS) and certain nationally protected species, such as badger, will require a licence from NRW. Compensatory habitat/sites, mitigation, supervision of works and post construction monitoring would likely be required.

d) Disturbance, Injury and Killing during Construction

- To reduce the risk of killing and injury to individual reptiles when vegetation is cleared it is recommended that a programme of translocation and mitigation based on a high population is undertaken prior to any site clearance.
- Removal or maintenance of habitats that have the potential to support breeding birds should take place outside of the breeding bird season (removal between the 1st September and end of February). There is a potential for a clash between the removal of vegetation to avoid impacts on birds and impacts on reptiles. This will need to be managed and planned once timings are known.

The provision of bird boxes, such as swift boxes, typical garden bird boxes, sparrow terraces and barn owl boxes will provide supplementary nesting sites.

- Any new lighting design should avoid lighting of habitats with the potential to support wildlife (such as vegetated habitats or buildings) and/or adjacent habitats. Suggestions for mitigating external lighting and achieving the lighting recommendations above are outlined in the best practice guidance by the Bat Conservation Trust (Ref. 11 and Ref. 12) and are applicable to several other nocturnal species.
- A vehicle traffic assessment should be completed to understand the likely impacts on habitats and species.
- A noise and vibration assessment as a result of piling should be completed to understand the likely impacts on species.
- Excavations, if left unfilled overnight, should be covered to avoid animals becoming trapped or excavations fitted with a scaffolding board ramp to allow any trapped animals to exit.

e) Pollution to Land and/or Water

- Appropriate measures should be in place to: control pollution and disturbance during construction and adhere to applicable published guidelines. These measures should be detailed and implemented via a Construction Management Plan (CMP) and appropriate Toolbox Talks.

f) Disturbance during Operation including Litter and Predation by Pets

- Areas set aside for wildlife (for example reptile receptor areas, woodland, diverse grassland planting) should be protected for the lifetime of the Project Site and should have management plans in place which are followed to protect and maintain the areas. For example, without active management through successional change grassland will turn to dense scrub which would make an area less suitable for reptiles.
- A Habitat Management Plan should be created for operation of the Project Site.

g) Spread of Invasive Species

- Invasive plants should be treated and removed from the Project Site as part of the Project. The removal of the plants from the Project Site will be of benefit to the biodiversity within the Project Site and the local area.
- Prevent the tracking of vehicles over or otherwise disturbing areas of invasive plant growth or areas of soil contaminated with the remains (roots, seeds, and rhizomes).
- Have an appropriate management plan in place during construction and operation to help prevent/limit any re-growth or re-introduction of invasive species that could be spread by works or invasive grounds maintenance activities, such as flailing and use of tractors or frequent trampling by people.

h) Biodiversity Enhancements

- 6.4.5 The National Planning Policy Framework (March, 2012) and the Environment (Wales) Act 2016, requires that developments enhance biodiversity, as well as just mitigating impacts.
- 6.4.6 A detailed list of recommendations has not been completed. Further recommendations can be made as a result of the further surveys and at EclA stage.
- 6.4.7 Suggested potential enhancement measures for the Project Site are provided below.
- Implement a sympathetic management regime for the vegetation within the Project Site to increase the conservation value and biodiversity of the Project Site;
 - Use locally native species within the planting and landscaping design, and species that are of a benefit to invertebrates; and,
 - Include the provision of bird nesting features within the landscaping design.

7. References

- Ref. 1 Defra (2007). Hedgerow Survey Handbook. A standard procedure for local surveys in the UK. Defra. London
- Ref. 2 Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London
- Ref. 3 CIEEM (2012) Guidelines for Preliminary Ecological Appraisal. Chartered Institute of Ecology and Environmental Management
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8. Appendices

Figure 1: Phase 1 Habitat Map

Project Title:

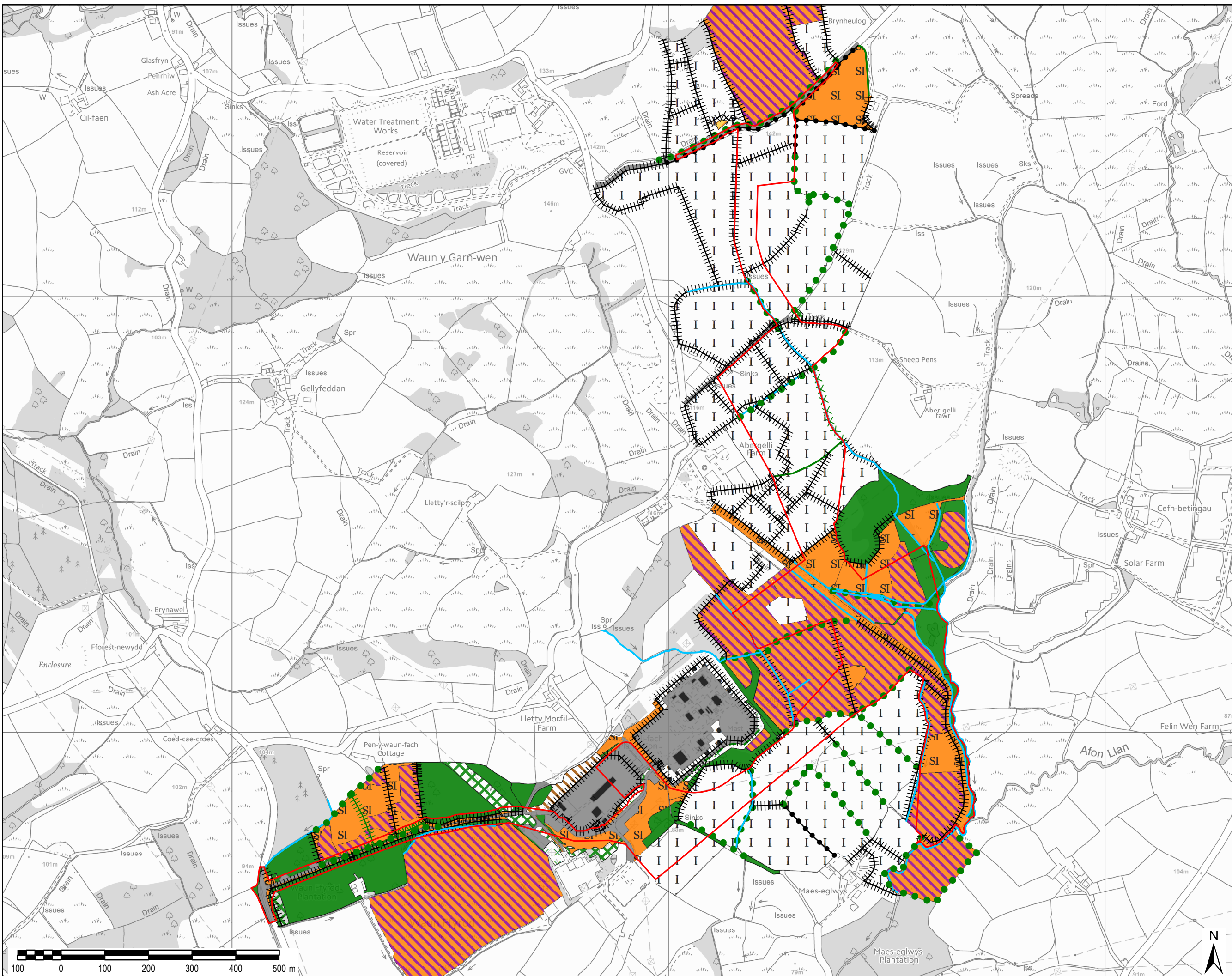
ABERGELLI POWER STATION

Client:

ABERGELLI POWER LTD.

LEGEND

- Project Site Boundary
- Phase 1 Habitat Linear Features**
- X Scrub - Scattered
- Row of trees - broadleaved
- Running Water
- Intact Hedge - Species-Poor
- - Defunct Hedge - Species-Poor
- W Hedge with Trees - Native Species-Rich
- |||| Hedge with Trees - Species-Poor
- |||| Fence
- Earth Bank
- Phase 1 Habitat Areas**
- Broadleaved woodland - semi-natural
- Broadleaved woodland - plantation
- Dense/Continuous scrub
- Scattered scrub
- Semi-improved - neutral grassland
- Improved grassland
- Marsh/marshy grassland
- Tall ruderal - herb and fern
- Dry heath/acid grassland mosaic
- Buildings
- Bare ground
- Hard standing



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AECOM Internal Project No:

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Drawing Title:

PHASE 1 HABITAT MAP

Scale at A3: 1:8,000

Drawing No: Rev:

FIGURE 1 005

Drawn: Chk'd: App'd: Date:

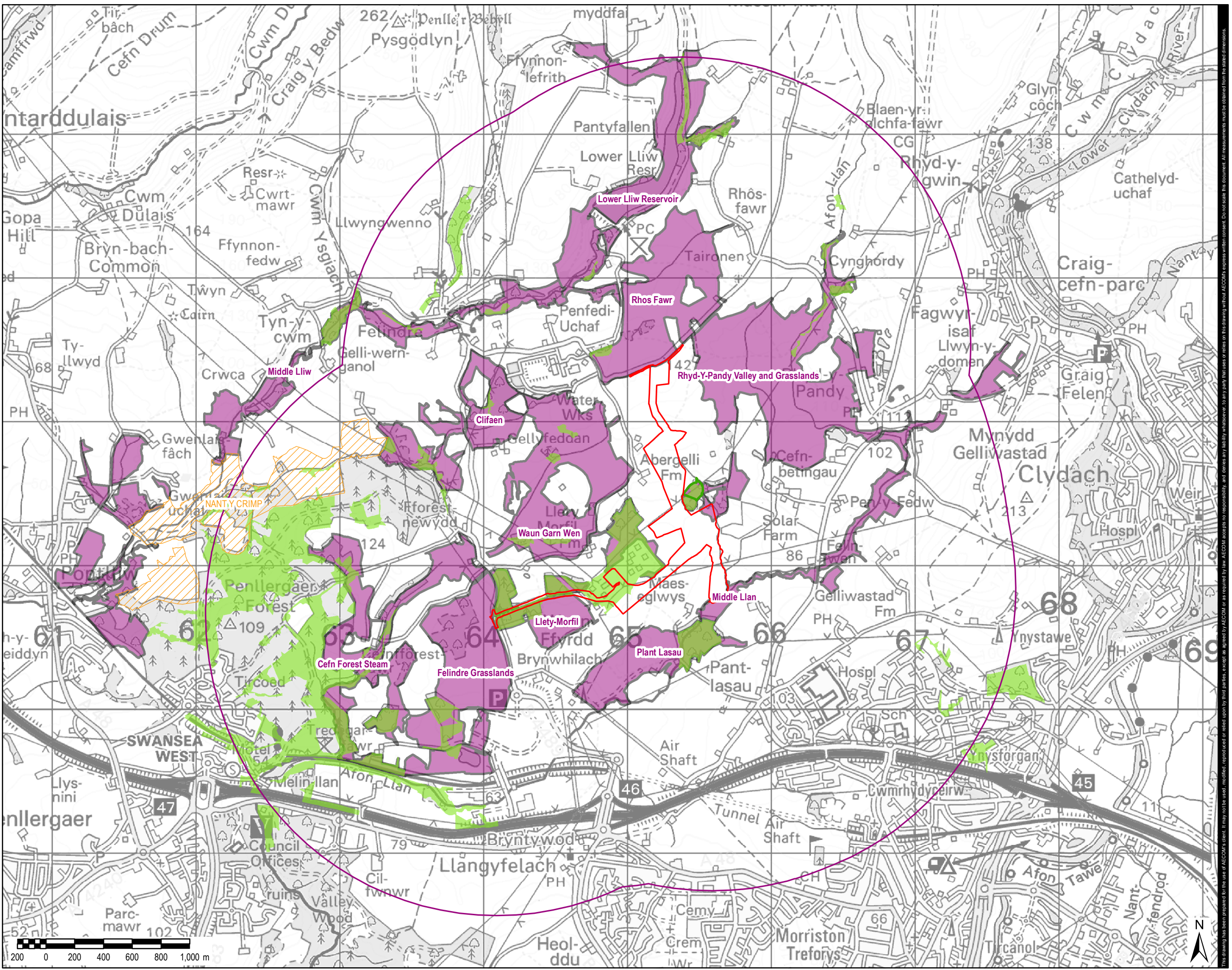
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Figure 2: Designated Sites

LEGEND

- Site Boundary
- 2km Study Area
- Site of Special Scientific Interest
- Tree Preservation Order (TPO)
- Ancient Woodland (AWI)
- SINC's



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KNOWN DESIGNATED SITES, AWI AND TPO

Scale at A3: 1:24,000

Drawing No: FIGURE 2

Rev: 001

Drawn: Chk'd: App'd: Date:

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Appendix A Wildlife Legislation and Local Planning Policy

8.2 Legislation – Habitats

8.2.1 A variety of sites are designated in the UK, under Conventions, Directives and Regulations for their nature conservation importance and interest. The general aim of these designations is to conserve and protect ecological resources, as well as raising awareness and understanding. Other non-statutory sites are afforded some protection through local plans. The following outlines the most common statutory and non-statutory designations:

Designation	Brief Description
Special Areas of Conservation (SAC)	SACs are sites selected to conserve the natural habitat types and species of wild flora and fauna listed in the Annexes of the Habitats Directive (further information regarding the Habitats Directive is set out in more detail in Table 8.3 below). They are the best areas to represent the range and variety of habitats and species within the European Union (EU).
Special Protection Area (SPA)	SPAs are strictly protected sites for the most important habitats for rare and migratory birds within the EU classified in accordance with Article 4 of the Birds Directive information regarding the Birds Directive is set out in more detail in Table 8.3 below).
Ramsar Sites	Ramsar Sites are wetlands of international importance. Ramsar Sites are protected, through the planning system, under the Wildlife and Countryside Act 1981 (as amended), and the Countryside and Rights of Way Act 2000 through their notification as SSSIs and through other regulatory systems addressing water, soil and air quality.
National Nature Reserve (NNR)	NNRs are nationally important areas of wildlife habitat and geological formations in Britain. NNRs are designated and protected under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). They receive additional protection under the Countryside and Rights of Way Act 2000. They are managed for the benefit of nature conservation.
Site of Special Scientific Interest (SSSI)	A SSSI is a site of at least national importance for nature conservation designated under the Wildlife and Countryside Act 1981 (as amended) due to its special interest in terms of flora, fauna or geological or physiographical features. Protection afforded to SSSI's was strengthened by the Countryside and Rights of Way Act 2000. It should be noted that under the Countryside and Rights of Way Act 2000 owners of SSSIs must give Natural Resources Wales (NRW) written notice before they begin any of the operations listed in the notification as likely to damage the special interest features, or if they allow others to carry out these activities. None of the listed operations can be carried out without NRW's consent.
County Wildlife Site (Local site)	A County Wildlife Site is a non-statutory site designated by a local authority as being of local nature conservation value.
Ancient Woodland	Ancient Woodland is a term applied to woodlands which have existed from at least Medieval times to the present without ever having been

Designation	Brief Description
Inventory	cleared for uses other than wood or timber production. A convenient date used to separate ancient and secondary woodland is about the year 1600. In special circumstances semi-natural woods of post-1600 but pre-1900 origin are also included.
Wildlife Trust Reserve	These non-statutory sites are managed by the Wildlife Trusts with the purpose of conserving wildlife.

8.3 Legislation – Protected Species

- 8.3.1 In addition to habitats, a number of species have been afforded protection through international/European and national law. Other species are considered to contribute to our ‘quality of life’. Although these species do not benefit from legal protection, they can be material considerations in the planning process. The table below outlines the key forms of protection afforded to species. The Countryside and Rights of Way Act, the Wildlife and Countryside Act 1981 (as amended), The Protection of Badgers Act 1992 and the Conservation of Habitats and Species Regulations 2017 are the main legislative framework for protection of wild animals in the UK. Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) covers birds, Schedule 5 covers other animals and Schedule 8 covers plants.
- 8.3.2 Species including bats, otters and great crested newts are listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. Badgers are protected under their own Act: The Protection of Badgers Act 1992. Activities affecting protected species must usually be conducted under licence obtained from the appropriate body (in Wales, this is Natural Resources Wales).
- 8.3.1 Developers must be able to show that all reasonable measures have been taken to ensure that protected species are not subject to disturbance. The habitats which regularly support the Conservation of Habitats and Species Regulations 2017 Schedule 2 species, the Wildlife and Countryside Act 1981 (as amended) Schedule 1 species and some Wildlife and Countryside Act 1981 (as amended) Schedule 5 species are also protected from disturbance and destruction. Again, all reasonable precautions should be taken to ensure that this does not happen. The Countryside and Rights of Way Act 2000 has strengthened enforcement powers and introduced a new offence of “reckless disturbance” that applies to both protected sites and species. **Error! Reference source not found.** below provides a summary of the relevant legislation with regards to protected and priority species.

Legislation	Brief Description
The Habitats Directive	The Habitats Directive 1992 (Directive 92/43/EEC sets out the legal framework requiring EU member states to protect habitat sites supporting vulnerable and protected species, as listed within the Directive. The need for an assessment of impacts on Natura 2000 sites (the collective name for European designated sites, including SPAs and SACs) is set out within Article 6 of the Directive. The Directive is transposed into UK law through the Conservation of Habitats and Species Regulations 2017) (the

Legislation	Brief Description
	"Habitats Regulations") and the Wildlife & Countryside Act 1981 (as amended).
The Birds Directive	The Directive on the Conservation of Wild Birds (Directive 2009/147/EC (the codified version of Council Directive 79/409/EEC as amended)) provides a framework for the protection, management and control of all species of naturally occurring wild birds in the European territory of Member States, including the UK. The provisions of the Birds Directive are transposed into UK law by the Conservation of Habitats and Species Regulations, 2017 and the Wildlife & Countryside Act 1981 (as amended).
Wildlife and Countryside Act (1981) (as amended)	<p>The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and (partially) the Birds Directive and the Habitats Directive are implemented in the UK. The Countryside and Rights of Way Act 2000 has strengthened this legal protection (see below).</p> <p>A small number of plant species are listed under Schedule 9 of the Wildlife and Countryside Act 1981, as amended, which includes species such as Japanese knotweed (<i>Fallopia japonica</i>), Himalayan balsam (<i>Impatiens glandulifera</i>), montbretia (<i>Crocasmia x crocosmiiflora</i>), giant hogweed (<i>Heracleum mantegazzianum</i>) and some cotoneaster species (<i>Cotoneaster</i> sp.). It is illegal to plant or to cause these plants to grow in the wild, and legal disposal methods for vegetation and soil subject to disturbance or clearance from a site must be used.</p>
Convention on Biological Diversity and the Countryside and Rights of Way Act 2000	<p>The Countryside and Rights of Way Act 2000 provides a statutory framework for biodiversity conservation. The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.</p> <p>Schedule 9 of the Act amends SSSI provisions of the Wildlife and Countryside Act 1981, including provisions to change SSSIs and providing increased powers for their protection and management. The provisions extend powers for entering into management agreements; place a duty on public bodies to further the conservation and enhancement of SSSIs; increases penalties on conviction where the provisions are breached; and introduce a new offence whereby third parties can be convicted for damaging SSSIs.</p> <p>Schedule 12 of the Act amends the species provisions of the</p>

Legislation	Brief Description
	<p>Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable' and create a new offence of reckless disturbance.</p> <p>The UK Biodiversity Action Plan (BAP) was published in 1994, and was the UK Government's response to the Convention on Biological Diversity (CBD), which the UK signed up to in 1992. It provides the framework for fulfilling the UK's responsibilities towards the Convention on Biological Diversity. Conservation of biodiversity (the variety of life on earth) is an essential element of sustainable development.</p>
Environment (Wales) Act 2016	<p>The Environment (Wales) Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. Part 1 relates to the sustainable management of natural resources. This ensures that the way in which the use of and the impacts on natural resources do not result in long term decline. The aim is to sustainably manage natural resources in a way and rate that meets the needs of present and current generations without compromising the needs of future generations.</p> <p>The Act also contains at section 7, a duty for the Welsh Ministers prepare and publish a list of the living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This section replaces the duty in section 42 of the NERC Act 2006.</p>
Protection of Badgers Act 1992	<p>The Protection of Badgers Act 1992 makes it an offence to wilfully take, kill, injure or ill-treat a badger, possess a dead badger or any part of a badger. Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. The Act defines a badger sett as 'any structure or place, which displays signs indicating the current use by a badger' and Natural England takes this definition to include seasonally used setts.</p> <p>Work that may disturb badgers or their setts is illegal without a development licence from the relevant statutory body (in this case Natural Resources Wales).</p>
The Hedgerow Regulations 1997	<p>The Hedgerow Regulations (1997) make provision for the protection of important hedgerows in England and Wales. The regulations affect hedgerows which are 20 m or more in length, or connected at both ends to another hedgerow of any length.</p> <p>They relate to hedgerows which are on, or adjoining land used for the following purposes: agriculture or forestry; the breeding or keeping of horses, ponies or donkeys; common land; village greens; and SSSIs (They do not include hedges that are</p>

Legislation	Brief Description
	<p>attached to, or marking the boundaries of a private house.</p> <p>It is an offence to intentionally or recklessly remove or cause or permit another person to remove a hedgerow or intentionally or recklessly remove, or cause or permit another person to remove, a hedgerow which is the subject of a hedgerow retention notice.</p>

8.4 Local Planning Policy

8.4.1 The table below provides a summary of relevant local planning policies found in the Swansea Unitary Development Plan. For the precise wording of each specific policy please refer back to the source document.

Planning Policy	Purpose /Relevant Sections
SP1 Creating a Quality Environment	<p>Sustainable development will be pursued as an integral principle of the planning and development process.</p> <p>Development proposals designed to a high quality and standard, which enhance townscape, landscape, sense of place, and strengthen Swansea Waterfront identity, will be favoured.</p>
SP2 - Creating a Quality Environment	<p>The countryside will be protected and conserved, with green wedges shaping the urban form and safeguarding the distinctive interplay of town and country. Village character will be protected.</p>
SP3 - Creating a Quality Environment	<p>The natural, built, and cultural heritage of the County will be protected and enhanced to safeguard from materially harmful development.</p>
Siting and Location - EV2	<p>The siting of new development should give preference to the use of previously developed land over greenfield sites, and must have regard to the physical character and topography of the site and its surroundings by:</p> <ul style="list-style-type: none"> i. Avoiding locations that would have a significant adverse impact on prominent buildings, landscapes, open spaces and the general locality, including loss of visual amenity, ii. Effectively integrating with the landscape, seascape or coastline by utilising topography to integrate into the contours of the site and avoiding conspicuous locations on prominent skylines and ridges, iii. Retaining important views into and out of the site, iv. Taking into account and where possible retaining site features including existing buildings, topography, landscape, archaeological and water features, trees and hedgerows, and, where appropriate: v. Undertaking, at the earliest opportunity, an assessment of species and habitats on site and, where planning permission is granted, implementing any necessary mitigation measures, ix. Determining whether the proposal would be at risk from flooding, increase flood risk off-site, or create additional water run-off, xiii. Having full regard to existing adjacent developments and the

Planning Policy	Purpose /Relevant Sections
	possible impact of environmental pollution from those developments, as well as the creation of any environmental pollution to the detriment of neighbouring occupiers (including light, air and noise).
Rural Development - EV21	In the countryside non residential development will only be permitted where it can be demonstrated that: iii. It is an appropriate development associated with farm diversification, sustainable tourism and recreation, or nature conservation and does not adversely affect the viability of an established farm unit.
Rural Development - EV22	The countryside throughout the County will be conserved and enhanced for the sake of its natural heritage, natural resources, historic and cultural environment and agricultural and recreational value through: i. The control of development, and ii. Practical management and improvement measures.
Sites of International Importance - EV25	Development, alone or in combination with other plans or projects, which is likely to adversely affect the integrity of a European protected site (SAC, Marine SAC, SPA and Ramsar Sites) and is not directly connected with or necessary to the management of the site, will not be permitted unless: i. There are imperative reasons of over-riding public interest, including those of a social or economic nature, which are sufficient to override the reasons for designation, and ii. There is no alternative solution. Where such development is permitted, planning conditions and/or obligations will be used to secure all compensatory measures necessary to ensure that the overall coherence of the European Site is protected.
SSSIs and National Nature Reserves - EV27	Development that significantly adversely affects the special interests of sites designated as SSSIs and NNRs will not be permitted unless the need for the development is of such significance that it outweighs the national importance of the designation. Where development is permitted, planning conditions and/or obligations will be used to protect and enhance those interests and where necessary provide effective mitigation and compensatory measures.
Sites of Local Importance - EV28	Within locally designated areas the natural heritage will be preserved and enhanced wherever possible. Development that would significantly adversely affect the special interest of Local Nature Reserves will not be permitted unless the need for the development is of such significance that it outweighs the importance of the designation. Development that would significantly adversely affect SINC or RIGs, or which would not provide for appropriate compensatory or

Planning Policy	Purpose /Relevant Sections
	<p>mitigation measures will not be permitted, unless it can be demonstrated to meet appropriate social or economic needs where the benefits in such terms would outweigh the harm to the feature concerned.</p> <p>Where development is permitted which would damage the nature conservation value of the site, such damage will be kept to a minimum, and appropriate mitigation or compensatory measures sought.</p>
<p>Trees, Woodland and Hedgerow Protection - EV30</p>	<p>Protection and improved management of woodlands, trees and hedgerows which are important for their visual amenity, historic environment, natural heritage, and/or recreation value will be encouraged, with priority being given to:</p> <ul style="list-style-type: none"> i. Protecting the remaining areas of ancient semi natural woodland and planted ancient woodland sites, ii. Promoting new planting with species appropriate to the location, where there is no conflict with other land uses or nature conservation interests, and iii. Ensuring that where management involves commercial felling and replanting, protection of amenity interests is achieved.
<p>Environmental Enhancement - EV32</p>	<p>Environmental improvement schemes will be implemented at a number of locations shown on the Proposals Map. These are intended to:</p> <ul style="list-style-type: none"> i. Improve visual appearance, natural heritage value and recreation potential, ii. Improve the setting of industrial, commercial and residential developments and transport corridors, and iii. Maintain, extend and improve the quality of the urban greenspace network in line with the aims of the ‘Greening the City’ strategy
<p>Protection of Controlled Waters - EV34</p>	<p>Development proposals that may impact upon the water environment will only be permitted where it can be demonstrated that they would not pose a significant risk to the quality and or quantity of controlled waters.</p> <p>Initiatives that lead to improvements in the quality of surface water will be approved subject to satisfactory ecological and visual safeguards.</p>
<p>Protection of Controlled Waters - EV35</p>	<p>Development that would have an adverse impact on the water environment due to:</p> <ul style="list-style-type: none"> i. Additional surface water run off leading to a significant risk of flooding on site or an increase in flood risk elsewhere, and/or ii. A reduction in the quality of surface water run-off, <p>will only be permitted where it can be demonstrated that appropriate alleviating measures can be implemented.</p> <p>Sustainable drainage systems (SUDS) will be encouraged wherever they would be effective and practicable, so as to ensure that development does not increase run off, and potentially damage</p>

Planning Policy	Purpose /Relevant Sections
	important landscape features and protected species and habitats. Where SUDS are not provided then any conventional drainage system utilised must improve the status quo.
Air, Noise and Light Pollution EV40	Development proposals will not be permitted that would cause or result in significant harm to health, local amenity, natural heritage, the historic environment or landscape character because of significant levels of air, noise or light pollution.

8.4.2 The table below provides a summary of relevant local planning policies found in the Swansea Local Development Plan 2010 – 2015: Deposit Plan (July 2016). For the precise wording of each specific policy please refer back to the source document.

Planning Policy	Purpose /Relevant Sections
ER 1 Climate Change	To mitigate against the effects of climate change, adapt to its impacts, and to ensure resilience, development proposals should take into account: <ul style="list-style-type: none"> i. Reducing carbon emissions; ii. Protecting and increasing carbon sinks; iii. Adapting to the implications of climate change at both a strategic and detailed design level; iv. Promoting energy and resource efficiency and increasing the supply of renewable and low carbon energy; v. Avoiding unnecessary flood risk by assessing the implications of development proposals within areas susceptible to flooding and preventing development that unacceptably increases risk, and, vi. Maintaining ecological resilience.
ER 2 Strategic Green Infrastructure Network	Development will be required to maintain or enhance the extent, quality and connectivity of the County’s multi-functional green infrastructure network, and where appropriate: <ul style="list-style-type: none"> i. Create new interconnected areas of green infrastructure between the proposed site and the existing strategic network; ii. Fill gaps in the existing network to improve connectivity; and/or, iii. In instances where loss of green infrastructure is unavoidable, provide mitigation and compensation for the lost assets.
ER 6 Designated Sites of Importance for Nature Conservation	Development will not be permitted that would result in a likely significant adverse effect to sites of international or national nature conservation importance. Development that would affect locally designated sites of nature conservation importance should maintain or enhance the nature conservation interest of the site. Where this cannot be achieved development will only be permitted where it can be demonstrated that:

	<p>i. The need for the development outweighs the need to protect the site for nature conservation purposes;</p> <p>ii. There is no satisfactory alternative location for the development that avoids nature conservation impacts; and,</p> <p>iii. Any unacceptable harm is kept to a minimum by effective avoidance measures and mitigation, or where this is not feasible compensatory measures must be put in place to ensure that there is no overall reduction in the nature conservation value of the area.</p>
<p>ER 8 Habitats and Species</p>	<p>Development proposals that would have a significant adverse effect on the continued viability of habitats and species, including those identified as priorities in the UK or Swansea Local Biodiversity Action Plan, will only be permitted where:</p> <p>i. The need for development outweighs the nature conservation importance of the site;</p> <p>ii. The developer demonstrates that there is no satisfactory alternative location for the development which avoids nature conservation impacts;</p> <p>iii. Effective mitigation measures are provided by the developer; And,</p> <p>iv. Any unavoidable harm is minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not feasible, compensation measures designed to conserve, enhance, manage and, where appropriate, restore natural habitats and species must be provided.</p>
<p>ER 9 Ecological Networks and Features of Importance for Biodiversity</p>	<p>Development proposals will be expected to maintain, protect and enhance ecological networks and features of importance for biodiversity. Particular importance will be given to maintaining and enhancing the connectivity of ecological networks which enable the dispersal and functioning of protected and priority species.</p> <p>Development proposals that could result in a significant adverse effect on the connectivity of ecological networks and features of importance for biodiversity will only be permitted where:</p> <p>i. The need for the development outweighs the nature conservation value of the site;</p> <p>ii. It can be demonstrated that there is no satisfactory alternative location for the 102 PPW sections 5.5.11 – 5.5.12 and TAN 6 Nature Conservation and Planning (2009) chapter 6 development;</p> <p>iii. A connected element of the natural resource is retained as part of the design of the development; and,</p> <p>iv. Compensatory provision will be made of comparable ecological value to that lost as a result of the development.</p>

<p>ER 11 Trees and Development</p>	<p>Development that would adversely affect trees, woodlands and hedgerows of public amenity, natural/cultural heritage value, or that provide important ecosystem services will not normally be permitted.</p> <p>Ancient Woodland, Ancient Woodland Sites, Ancient and Veteran trees merit specific protection and development will not normally be permitted that would result in:</p> <ul style="list-style-type: none"> i. Fragmentation or loss of Ancient Woodland; ii. The loss of an Ancient or Veteran tree; iii. Ground damage, loss of understorey or ground disturbance to an area of Ancient Woodland or Ancient or Veteran Tree’s root protection area; iv. A reduction in the area of other semi natural habitats adjoining Ancient Woodland; v. Significant alteration to the land use adjoining the Ancient Woodland; vi. An increase in the likely exposure of Ancient Woodland, Ancient or Veteran Tree to air, water or light pollution from the surrounding area; vii. Alteration of the hydrology in a way that might impact on Ancient Woodland, Ancient or Veteran Trees; viii. Destruction of important connecting habitats relating to Ancient Woodland; ix. Degradation of important archaeological or historical features within Ancient Woodland or associated with Ancient or Veteran trees; x. Destruction of Plantations on Ancient Woodland Sites (PAWS); and/or, xi. Development within 15m of Ancient Woodland.
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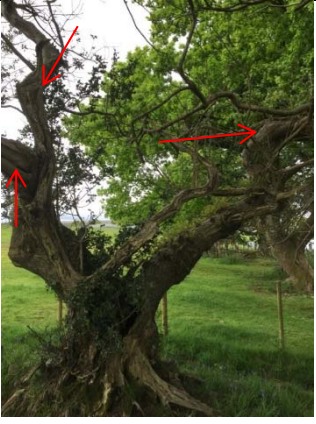


Appendix B Target Notes for Phase 1 Habitat Map

Target Note Number	Description
1	The woodlands on either side of the path look like they have received historical infill planting.
2	Redpoll, goldcrest, blackcap, robin, blue tit, wren, blackcap, blackbird heard in this location.
3	Tree with tag number 01241. Possible TPO.
	[REDACTED]
5	Cuckoo and bullfinch heard in this location.
6	Historical earth bank.
7	Neutral semi-improved grassland on both sides of the track. Species include ribwort plantain, sweet vernal grass, meadow buttercup, silverweed, creeping cinquefoil, black knapweed. This area is, good for reptiles. There is a strip of land used as a horse gallop which is covered in mulch and bark chippings.
8	A large pile of wood within the area of scrub, which provides opportunities for reptiles.
9	[REDACTED]
10	Gate.
11	Gate.
12	There is an open area of gravel and semi-improved grassland within woodland area, this has good reptile potential.
13	An area of bracken, some of which has been recently cleared. This area has good reptile potential.
14	There is a gravel path area with semi-improved grass growth. This area has good reptile potential.
15	There is a semi-improved grass bank with some newly planted trees. This area has potential for reptiles.
16	A small area of short perennial vegetation and exposed gravel within the semi-improved grassland.

Target Note Number	Description
17	Some planted hazel and willow within the semi-improved grassland.
18	The area by the pylon is a matrix of semi-improved and marsh grassland with planted shrubs. There is good reptile potential here.
19	There is a gabion cage between the scrub and the woodland. This has potential to offer shelter and hibernation opportunities for reptiles.
20	There is scrub on the bank adjacent to a gravel path. This bank has good potential for reptiles.
21	Remnant of stone wall/earth bank hedgerow with native bluebells and oak saplings.
22	Two lapwing seen flying over this field of marshy and improved grassland.
23	Field with solar panels which was not accessed.
24	Raised bank with stone underneath and scattered hawthorn and oak.
25	Public Right of Way (PRoW) stile.
26	PRoW gate.
27	Gate in fence.
28	Pond.
29	Broadleaved woodland trees in this area don't look very suitable for roosting bats. Looks likely to support foraging and commuting bats. A PRoW footpath runs through this woodland.
30	A pile of wood, sheep's wool, manure and straw. This offers some reptile potential.
31	Potential for reptiles on grass verge.
32	Potential for reptiles within grassland on road edge on either side of this road.
33	Potential for dormice within woodland and on edge of road within scrub.
34	Potential for dormice within trees and scrub along road edge.
35	Potential for dormice, foraging and commuting bats and badger.
36	Tall ruderal and scrub vegetation under the pylons on both sides of the road with potential to support reptiles. The area is bordered on either side by trees with potential for commuting and foraging bats.
37	Potential for reptiles.

Target Note Number	Description
38	The scattered scrub and semi-improved grassland on this bank offers low potential for reptiles due to its road barrier.
39	Potential for reptiles on earth bank.
40	Pond.
[REDACTED]	[REDACTED]
42	Trees within this woodland need assessment for bat roosts.
43	Brown hare seen in this location on 16/05/17.
44	Location of Pond 16 - dry at time of Phase 1 Habitat Survey.

Appendix C Site Photographs

	
<p>Photograph 1: Bat Tree 1. Red arrows indicate features of bat interest.</p>	<p>Photograph 2: Bat Tree 5.</p>
	
<p>Photograph 3: Bat Tree 6.</p>	<p>Photograph 4: Bat Tree 7.</p>
	
<p>Photograph 5: Bat Tree 8.</p>	<p>Photograph 6: Bat Tree 9.</p>



Photograph 7: Building 2.



Photograph 8: Building 2.



Photograph 9: Building 2.



Photograph 10: Building 2.



Photograph 11: Building 2.





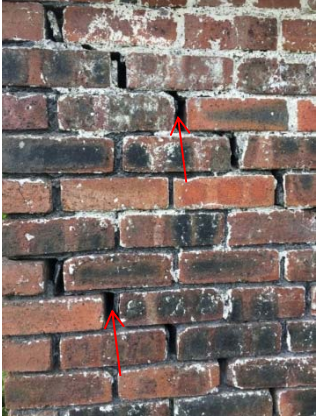



Photograph 12: Building 3.









Photograph 13: Building 3.



Photograph 14: Building 3.

	
<p>Photograph 15: Building 3</p>	<p>Photograph 16: Building 4.</p>
	
<p>Photograph 17: Building 4, a close up of photograph 16.</p>	<p>Photograph 18: Japanese knotweed, Invasive Species Point 4.</p>
	
<p>Photograph 19: Area of gravel pathway within semi-improved grassland bordered by scrub and a row of trees (Appendix B: Target Note 14).</p>	<p>Photograph 20: An area of wood, sheep's wool and manure within an improved grassland field (Appendix B: Target Note 30).</p>

	
<p>Photograph 21: An area of semi-improved grassland in the south of the Project Site.</p>	<p>Photograph 22: The road leading to National Grid area, bordered by woodland, hedgerows and rows of trees.</p>
	
<p>Photograph 23: An area of dense scrub bordered by woodland.</p>	<p>Photograph 24: An area of semi-improved grassland and scrub adjacent to woodland.</p>
	
<p>Photograph 25: A track with semi-improved grassland either side. A row trees is visible in the background (Appendix B: Target Note 7).</p>	<p>Photograph 26: An improved grassland field with running water (ditch) and a row of trees.</p>